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AN INVESTIGATION OF THE ESSENTIAL HEALTH SERVICES AVAILABLE TO INTERNALLY DISPLACED POPULATIONS (IDPs) IN NORTHERN NIGERIA

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Abstract

Background

Since 2011, Nigeria has experienced major conflicts from the Boko Haram terrorist group in the north-east region. Over 20 million people have been affected and about two million were forced out of their homes to other countries as refugees or remained in the country as Internally Displaced Persons (IDPs). As of December 2015, the majority of IDPs had settled across 13 of the 37 states in the country, and about 19% (~418,000) lived in camps or camp-like settings. Prior to this conflict, the northern regions had very poor health indices including poor immunisation coverage of 14.2% compared to the national average of 51%. Among the IDPs, the most common health conditions and causes of deaths were related to infectious diseases and severe acute malnutrition. Limited evidence existed on the availability of health-related resources and the IDP health management processes. Also little was known on the perceptions of IDPs in respect to their health. This thesis aimed to review the accessibility and provision of essential health services available to IDPs living in camp-like settings in Northern Nigeria, from both user and provider perspectives. Observed practices were assessed in relation to the IDP health issues and internationally recommended standards.

Methods

A systematic review was conducted to appraise the essential health interventions implemented among conflict-induced IDP locations in low and middle income countries from year 2000 to 2017. Primary data were collected in Nigeria, using a cross-sectional mixed-methods study approach, from nine camps across seven states between September and October 2016. Camp audits were performed

through direct observations and interviews with camp managers (CMs) and the findings were assessed against 15 of the 40 Sphere minimum standards. A survey was conducted with 2,253 IDPs using an interviewer-administered questionnaire, which included questions on displacement history, living conditions, personal health history, and involvement in management. Focus group discussions (FGDs) exploring the internal IDP management structures were conducted with IDPs in eight camps. While semi-structured face-to-face interviews aimed to explore different perceptions around camp, health and external management processes were conducted with nine CMs, seven health service providers (HSPs) and eight administrative policy makers (APMs).

Results

From the systematic review, 28 publications met the inclusion criteria suggesting not many peer-reviewed papers had been published in this study area since the year 2000. Most studies were cross-sectional and all were from Sub-Saharan African and South Asian regions. The studies focused more on disease prevention interventions which included water treatment and disease treatment interventions, for example malaria. Only one study reported on food distribution and two studies on vaccination. A key recommendation from the included studies was the need for more intervention evaluation assessments to be carried out.

The primary data collection showed only three of the nine camps visited had external administrative support and two camps were planned sites. Assessment of the audit findings showed only five of the 15 standards reviewed, including availability of water and shelter, were “partially met” and the others were “unmet”. These “unmet” standards included those related to sanitation, vaccination, planning, and community involvement. The majority of IDP disease burden were attributed to common diseases including malaria (57%), fever (23%), typhoid

(8%), diarrhoea (5%) and cough (3%). Factors significantly associated with increased likelihood of falling sick were age, overcrowding, long term-illness, type of toilets used, the distance from households to toilets, and the presence of disease-causing vectors. The self-reported proportion of IDPs ever vaccinated was 62.4%, but only 15.5% was received while in the study camps. The FGDs and interviews showed general lack of knowledge on recommended IDP management guidelines. Also observed was the implementation of non-standard management approaches, poor prioritization of IDP needs, weak government involvement especially in informal camp locations, and high reliance on non-governmental and international organisations.

Conclusions

Several gaps existed between the IDP needs, health-related resources provided and recommended international standards. Disparities were also observed in resource availability across the different camp types and locations. IDPs residing in formal camps had more support and resources compared to those in informal camps. These inequalities suggested IDP management was mostly unstructured and this contributed to further deprivation and poorer quality of life for the IDPs.

Ensuring standardised management, provision and even distribution of resources across IDP locations, would improve IDP management and health outcomes. To accomplish this, the level of government engagement in IDP management needs to be amplified. Achieving this would require the review and adoption of the Nigerian national IDP policy. This would increase accountability from all relevant government organisations and improve resource prioritization. In addition, empowering and engaging the IDPs in management processes would equip them to better manage their affairs, and this would in turn reduce the burden on supporting organisations.

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“There is grace for every stage and for every pace”

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- Infectious disease prevalence and vaccination management among internally displaced people living in camp-like settings in Nigeria: A mixed-method study

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- Health needs assessment among internally displaced people living in camp-like settings in Nigeria **(Awarded Student Choice)**

East Midlands Doctorate (EMDoc) Conference (19th September 2018) – Poster

- Infectious disease management among internally displaced people living in camp-like settings in Nigeria: A mixed-method study

Society for Risk Analysis (SRA) 2017 Annual Meeting, USA (10th – 14th December 2017) – Oral

- Assessment of health-related risk factors in internally displaced person populations living in camp settings in Nigeria **(Awarded Student Merit Award, Risk Policy and Law)**

The University of Nottingham Centre for Health Innovation, Leadership and Learning (CHILL) Annual Event (13th October 2017) – Oral

- The investigation of essential health services available in Internally Displaced Populations in Nigeria

University of Nottingham Faculty of Medicine Postgraduate Research Forum 2017, UK (29th June 2017) – Oral & E-poster

- An assessment of vaccination and health service management in Internally Displaced Populations (IDPs) in Nigeria

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List of Abbreviations

APM	Administrative Policy Maker
BCG	Bacillus Calmette–Guérin
CHE	Complex Humanitarian/Health Emergencies
CHW	Community Health Worker
CM	Camp Manager
DPT	Diphtheria-Pertussis-Tetanus
EPI	Expanded Program on Immunisation
FCT	Federal Capital Territory
FGD	Focus Group Discussion
HSP	Health Service Providers
IDP	Internally Displaced Person/Population
MCH	Maternal and Child Health
MMR	Measles-Mumps-Rubella
NCD	Non-Communicable Disease
NEMA	National Emergency Management Agency
NGO	Non-Governmental Organisation
OPV	Oral Polio Vaccine
PHC	Primary Healthcare/Centre
SEMA	State Emergency Management Agency
TBA	Traditional Birth Attendant
WASH	Water, Sanitation and Hygiene
WHO	World Health Organisation

1 INTRODUCTION

Disasters, both natural and man-made, result in human migration and population displacements and have severe humanitarian, economic and public health implications.[1–3] Individuals leave the affected countries as "Refugees" or "Asylum Seekers", or remain within the country borders as "Internally Displaced Persons". According to the United Nations Commission on Human Rights, Internally Displaced Persons (IDPs) are defined as;[4]

> *"…persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of, or in order, to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border"*

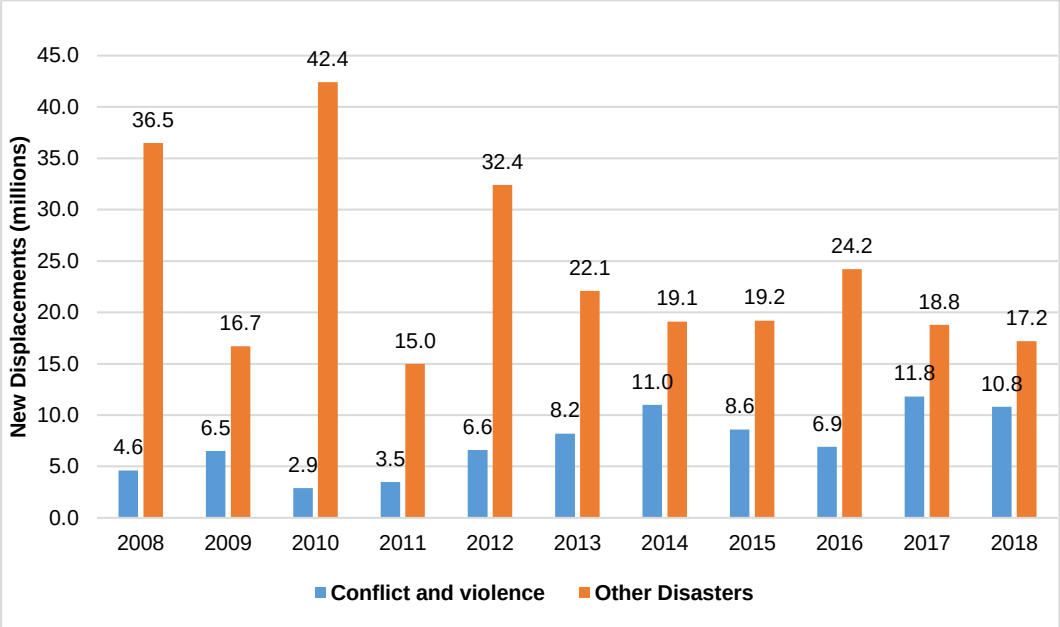
Basic needs of refugees and IDPs are similar, but the management approach differs. Since refugees migrate into other countries, they are under international jurisdiction, while IDPs remain the responsibility of the affected country's national authorities.[4,5]

In contrast to natural disasters that are usually unavoidable, conflict crises are driven by human activities. Conflicts are mostly started by the targeting of specific groups for various reasons like politics and ethnoreligious issues.[3] These often lead to long-lasting or permanent displacements.[6]

The 2019 Global Report on Internal Displacement (GRID 2019) showed that displacement due to conflict and violence has continuously increased over the past decade **(Figure 1.1)**.[7] According to the GRID 2019, 41.3 million people were internally displaced by conflict and violence, with 28 million new internal

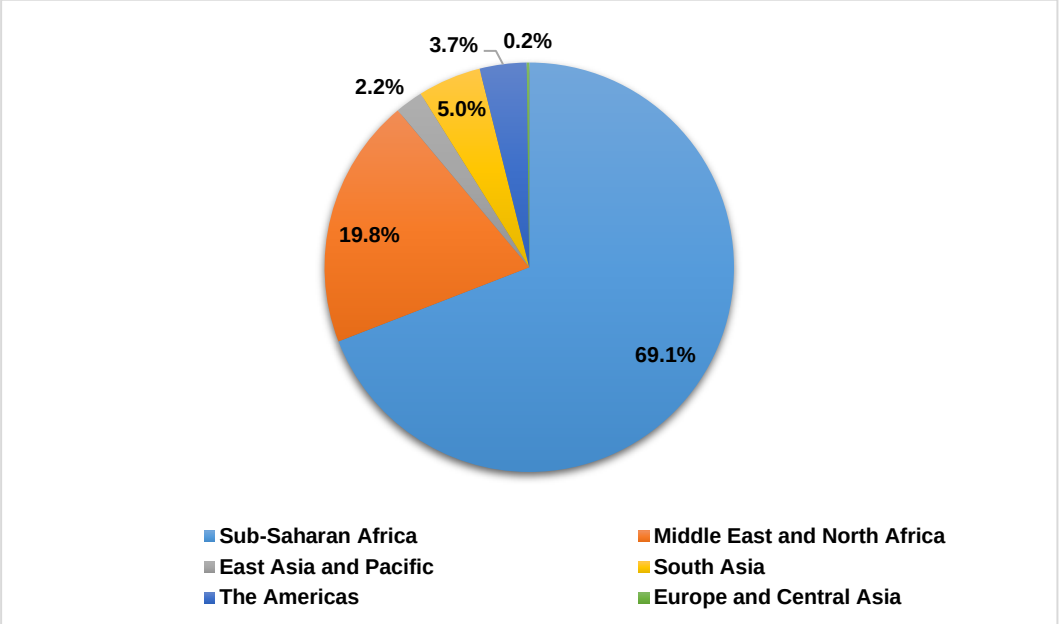
displacements occurring in 2018, and this was considered the highest figures ever recorded.[7] This a significant increase from the GRID 2016, which reported 40.8 million IDPs from conflict and violence with about 25.4 million occurring between 2007 and 2015.[6]

Figure 1.1 – Global displacement of new individuals from conflict and other disasters (2008 to 2018)



As of December 2018, about 88.9% of conflict displacements were from countries within the sub-Saharan Africa and Middle-Eastern regions **(Figure 1.2)**.[7] However, displacement from conflicts in Sub-Saharan Africa increased more significantly from 46.4% in 2017 to 69.1% in 2018 but declined in the Middle-Eastern region from 38.1% to 19.8%.[7,8] High rates of conflict and violence displacement are mostly attributed to the increased targeting of civilian populations untrained to fight and, as such, are forced to flee the locations of violence.[9] This trend was particularly demonstrated in areas targeted by terrorist groups the Boko Haram sect in Nigeria (Sub-Saharan Africa) and ISIL in Syria (Middle-East).[10–12]

Figure 1.2 – Percentage of new displacements in various regions in 2018



1.1 Global burden of conflict-induced internal displacement

Although IDPs still reside within the affected countries, they have less access to essential services compared to non-displaced populations.[13] Generally, for displaced people to have better chances of receiving humanitarian aid, they have to live within a camp or camp-like setting.[13] This option does not, however, guarantee sufficient provision of needed support.[14] Unlike refugees, the depth of IDP needs are mostly hidden from international view; hence, IDPs not resident within formal camps are further disadvantaged and appear 'invisible'.[13,15] Despite this, most IDPs prefer not to stay in camps for varied reasons including pride, religion and cultural beliefs.[13]

The complexity of conflict humanitarian crisis, especially those resulting in mass population displacements led to the terminology, "Complex Emergency" also known as "Complex Humanitarian Emergencies" (CHE).[16] The term describes situations and combination of factors, such as war, civil strife, food

shortages, and population displacement, that affect large civilian populations and lead to significant excess mortality and morbidity.[9]

1.1.1 Complex Humanitarian Emergency (CHE)

CHEs unfold in phases with the related problems and priorities shifting over time but evolving in a relatively similar manner despite the root causes.[1,9,17] There are two fundamental phases in a displacement situation: emergency and post-emergency phases.[17] Emergency phases follow the immediate movement of affected people and are characterised by mortality rates higher than the pre-conflict period figures; while post-emergency phases start when mortality levels return to baseline levels.[17] Activities shift from emergency to post-emergency stages once the affected populations become relatively stable, i.e. when they show clear reductions in the number of new displacements.[18] In this post-emergency, the ideal next phase is the linking of relief, rehabilitation and development (LRRD). However, implementation of this remains challenging and uncoordinated in most humanitarian settings.[19]

Most CHEs result from a combination of several factors. These include government domination, intense political rivalry, ethnic or religious group discriminations (also known as ethnic cleansing), mass human right abuse or extreme radical beliefs that lead to civil unrest, violence, and open-armed conflict.[9,20,21] Recent causes of conflict-induced displacements have been ethnic cleansing engendered by religious and ideological extremism aimed to counter or weaken social or cultural structures.[22,23] An example is the Islamic terrorist group in Nigeria, Boko Haram, which translates to “Western education is forbidden” from the Hausa language.[11,24] The group first claimed to be fighting western education and started by kidnapping and killing of school

children.[11] However, the agenda of the group became unclear when their violent acts extended to mosques, which are Islamic places of worship.[24]

Mass population displacement resulting from conflict-induced crises have high public health consequences which contribute to further complexities. These issues include disruption in healthcare services and education, nutritional deterioration, poor living conditions, higher risks of morbidity and mortality; and long-term health impacts.[9,14,25] These outcomes are worsened in developing and low-income countries, which already experience poor health indices, adverse climate conditions, and food shortages. An example was seen in Sudan and Somalia. In both countries, which are prone to droughts, violence and displacement outcomes were catastrophic. A combination of these factors contributed to famine in the region and worsened the existing challenges.[9] Such amplification in CHE health disparities contributed to conflict being considered a major determinant of health.[26,27]

1.1.2 Public health consequences of population displacement

Health status of displaced populations is weakened due to disruption in their normal lifestyle and poor access to basic services.[9] Those settled in locations closest to ongoing conflicts are generally more difficult to reach for assistance to be offered.[9] Accumulation of these issues contributes to an increase in morbidity and mortality rates. Hence public health management in CHEs takes into consideration, not only the needs of the people but also the crisis root causes (drivers and triggers of displacement), morbidity and mortality trends, population peculiarities and settlement location.

1.1.2.1 Mortality trends in displacement situations

During the early emergency phases, mortality rates are usually high, and the indicator used to monitor these mortality levels is the Crude Mortality Rate (CMR). CMRs during CHEs is the number of deaths per 10,000 daily (deaths/10,000/day).[28] This proportion allows for early detection of sudden changes and is used to determine emergency levels and response rates. CMRs reveal the current population health conditions, which include the health status, determinants of health, health outcomes and disease prevalence. These factors are then used to provide a baseline for measuring the humanitarian needs of the affected populations.[22,29,30]

Children, the elderly, and women are usually the most at-risk groups, due to higher susceptibility to infections and exploitation.[14,31] Hence, CMR exceeding 1/10,000 per day or 4/10,000 per day in children under five years old, when compared to normal CMR of the general population, demands critical attention.[31,32]

1.1.2.2 Predominant health challenges in humanitarian emergencies

Diarrheal diseases, measles, acute respiratory infections, malaria, and other communicable diseases account for 60-95% of reported deaths among displaced populations.[17,31,33–36] Prevalence of these diseases, most of which are vaccine-preventable, are usually highest among children,[37,38] and multiple outbreaks are also common. For example, an epidemic of dysentery can occur following a cholera outbreak.[39] HIV/AIDS and sexually transmitted diseases (STDs) are also major concerns in disaster and displacement conditions.[17,37,40] Transmission risks of both escalate due to poverty, powerlessness, social instability, and sexual violence, especially against

women.[31] Although multiple epidemics and outbreaks are known problems during displacement, links between two outbreaks are rarely reported with most reports focusing on individual episodes. Consequently, some outbreaks may be overlooked, resulting in a significant gap in epidemic management.[41]

Other factors that impact the health of displaced people include their living conditions, such as overcrowded accommodations, poor sanitation, poverty, and malnutrition.[42,43] Where agriculture is the main source of livelihood, displacement often leads to food insecurity crisis and additional complications.[6] Also, the psychological and mental health of displaced people is severely affected due to trauma and anxiety.[14,22,44,45]

In less developed regions, like most countries in Sub-Saharan Africa, combined effects of the factors mentioned above result in significantly higher mortality rates.[1,42,46] Although high mortality rates; those over the global 1/10,000/day emergency threshold[28] or the Sphere threshold of mortality rate double the rate before displacement;[47] are indicators of a humanitarian crisis emergency, a decline in these figures do not necessarily imply the crisis is over.[48] For instance, it is argued that both indicators do not always reflect the magnitude of a crisis. An example was in Nigeria when the crisis in the north-east was not considered “catastrophic” because the mortality rates were lower than the global thresholds.[49] Field humanitarian workers, however, contested this based on their direct observations of the critical conditions among affected populations.[49] As such, Keely et al. argues that morbidity may be a better indicator of population health in CHEs than mortality.[32]

1.1.2.3 Health management during displacements

Conflict in developing countries reverses the progress made in primary healthcare improvement over time. The resulting weakened health system, due to the destruction of facilities and destabilisation of health services, causes a decline in healthcare coverage.[37,42,50] Although healthcare is required for all IDPs; some services may need to be tailored to different groups, and specialised interventions may be required.[14,22,44,46] Hence, in such settings understanding the health needs, including the accessibility of basic healthcare management, is of great public health importance.

Essential priorities during the first weeks of a disaster emergency are mainly food, water, and shelter. These needs remain vital through all displacement phases until durable solutions are established, such as reintegration and resettlement. Potable water is particularly of high priority as it helps to avoid water-borne diseases, for instance, cholera, diarrhoea and typhoid.[51–53] High transmission rates of such infectious diseases make vaccination provision critical in humanitarian situations.

Mass immunisations have been known to be very effective in reducing morbidity and mortality rates in displacement settings.[9,54] However, giving full immunisation during displacement takes time, therefore affected groups are often unprotected for long periods.[55–57] Non-communicable diseases (NCDs) like cardiovascular and mental health conditions are also significant health challenges in displacement settlements.[14,46] However, management of these NCDs are often more complicated.[58–62] Healthcare accessibility is one of the difficulties usually encountered, and this could range from inaccessibility to disproportionate access when compared to local residents.[58,59] Studies on

NCDs among IDPs are limited, and evidence on access inequality is mostly from displaced populations residing outside the affected countries, i.e. refugees and asylum seekers.

Overall, despite the increased frequency of conflicts, as well as the direct and indirect impacts of public health issues, health management on displaced populations remain poorly documented especially for IDPs.[42,63,64]

1.2 Burden of displacement in Nigeria

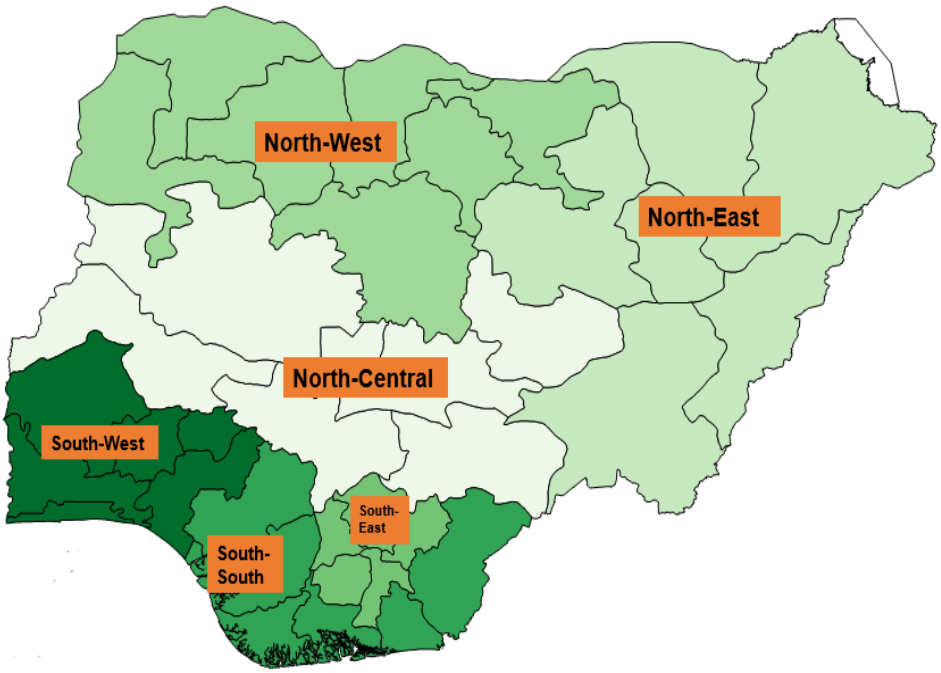
Nigeria has experienced various forms of internal displacement, from armed conflict to natural disasters, ethnoreligious disputes and communal clashes, which have affected millions of people.[6,65] Leading causes of these displacements are violence hinged on poor governance, underdevelopment, mismanagement, chronic abuse of power and inequities.[66,67] As of 2014, over 75% of displacements in the country were attributed to the Boko Haram armed conflict which resulted in a severe humanitarian crisis in the northern region.[6,68]

The Boko Haram conflict started in 2009. This conflict became a major international emergency in 2011, and a human displacement crisis in 2014.[11] Previous research on the group stated they combined radical Islamic agenda and violence, with a goal to establish an Islamic state and fight against western education.[11,69] However, several indications have shown the group is an outcome of political, social, economic and religious factors, and their true intentions and demands are unknown.[66,70,71]

Nigeria has a population of over 182 million with a life expectancy of approximately 56 years.[72] The country is divided into 36 states and a Federal

Capital Territory (FCT), also known as Abuja. These states are grouped under six geopolitical zones, namely the north-central, north-east, north-west, south-east, south-south, and south-west **(Figure 1.3)**. Areas most affected by the crisis displacement are in the northern zone which practices mainly Islamic religion, while the southern zones are predominantly Christians.

Figure 1.3 – Map showing the Nigeria geopolitical regional distribution



The north-east, the primary conflict area, is the largest geographical zone and has six states. Three states (Borno, Yobe, and Adamawa) were critically affected directly, while the other states (Bauchi, Gombe and Taraba) faced minimal direct violence but higher secondary effects from the IDP migration burden.[73]

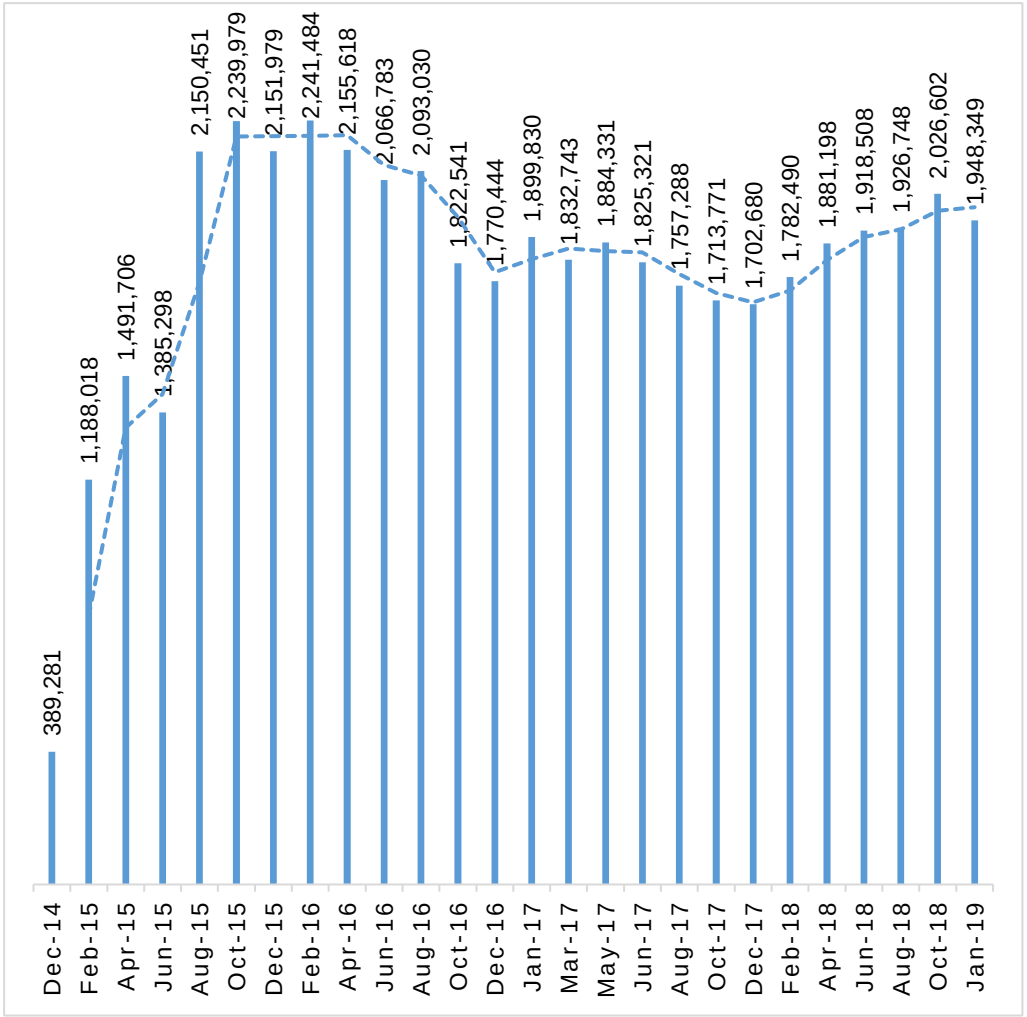
Text Box 1.1 – Displacement Tracking Matrix

Displacement Tracking Matrix

DTM is a system composed of a variety of tools and processes designed and developed to track and monitor population displacement during crises. Tools capture location and movement data.

Displacement issues in the country are monitored by the International Organisation on Migration (IOM) using a Displacement Tracking Matrix (DTM).[68] Since 2014, the DTM has captured information on the conflict crisis in Nigeria and observations showed that displacement trend fluctuated over the years. A summary of the IDP populations from the DTM reports between December 2014 and the last report to-date in January 2019 is shown in **Figure 1.4**.

Figure 1.4 – Estimated numbers of IDPs in Nigeria from December 2014 to January 2019



The number of conflict-induced IDPs hit a peak in 2015, after increased violence, killings, and kidnappings by the Boko Haram group in 2014. At this point, over 2.2 million people from an estimated 300,000 households were internally displaced. About 2% of those affected fled to neighbouring countries: Cameroon, Chad, and Niger as refugees.[74] Fluctuations in IDP populations were affected by both violence and location accessibility. Population numbers increased during periods of intense violence and when more areas became accessible for assessment. While the decline occurred when IDPs sought refuge in neighbouring states or communities, migrated for work, or returned to their hometowns.[75] Increase since January 2017 was attributed to new volatile situations in the north-east and the increasing numbers of returnees from other countries and previous displacement locations.[76]

Number of states assessed by the DTM varied during each monitoring round. Assessments between December 2014 and June 2015 were based on five or six north-eastern states; August and October 2015 had 8 and 10 states respectively, while December 2015 to August 2016 had 13 states. Increase in the number of monitored states reflected IDP migration and wider settlement locations.[68] However, since October 2016, only IDPs in the north-east (6 states) have been continuously assessed. The reduction showed a narrowing of humanitarian support focus. Hence, IDPs remaining in regions outside the north-east were not actively monitored.

According to the 2017 Nigerian Humanitarian Needs Overview (HNO), 26 million people had been affected by the crisis; and as of January 2019, about 7.1 million people were estimated to be in need.[75,77] The DTM reports showed

that among all IDP populations, over 50% were women and girls. Also, about 55% were children under 18 years old, and over half of these were five years old or younger. The 2016 HNO reported that about 2% of displaced households were headed by children under 18 years, and about 32,000 children were unaccompanied and separated from their families.[73] It was also reported that child-led households struggled to access food, water, health services, shelter, and other necessities; thus highlighting the need for more humanitarian support.

With these figures, Nigeria has continually been ranked globally among the top ten countries with the highest numbers of conflict-induced IDPs.[7,8] It is feared that if not managed, the situation could become intractable and the IDPs would face a future of prolonged and multiple displacements.[6] Multiple displacements occur when displaced populations after being displaced from their original homes are again displaced from places where they may have settled, and this has been observed in countries that experience protracted conflicts.[78,79]

1.2.1 IDP displacement settlement locations

Generally, disaster-affected displaced populations settle in camp-like sites or within other communities who act as hosts. Often these hosts are relations of the IDPs. As at 2015, IDPs in Nigeria had migrated around the country and settled in 13 northern states: Adamawa, Bauchi, Benue, Borno, Gombe, Taraba, Yobe, Nasarawa, Plateau, Kaduna, Kano, Zamfara and the FCT.[68] The majority did not stay in camps but preferred to reside within host communities who provided them with basic shelter or land space to settle on temporarily. Consequently, most IDP locations were not considered as official

settlements. IDPs in host communities generally lacked direct access to humanitarian assistance as they were assumed to be supported. Despite these, camps were not always the first settlement choices, and reasons provided included the perception that host community environments offered better physical and emotional security and cultural acceptance.[13]

The DTM assessments grouped camp-like settlements into three types:

- **Camps**: Open-air settlements, usually makeshift shelters made-up of tents put up on available land or in unfinished buildings.
- **Collective centre**: Pre-existing building structures, such as schools and hospitals, used for collective and communal settlements of the displaced population.
- **Transitional centre**: Centres which provided short term/temporary accommodation for displaced persons (duration of stay vary by centre).

At the peak of the crisis in February 2016, there were over 2.2 million IDPs, and 1.9 million were associated with the Boko Haram crisis.[80] At this stage, 92% of IDPs lived in host communities while 8% lived across 84 camp and camp-like settings. Most IDPs settled on sites without formal approval from the authorities, and such locations were considered “self-settled” camps.[81]

1.2.2 Overview of IDP challenges in Nigeria

Both IDPs and most host communities were considered vulnerable to disease and in need of assistance. In 2016, about 450 health facilities in four north-east states (Borno, Adamawa, Yobe, and Gombe) were damaged, and only 46% of those in Borno state were functional.[75] Other healthcare challenges

included lack of drugs, medical equipment, skilled health workers and effective referral systems. Access to health facilities was highly variable and depended on location.[37,75]

Common health conditions among the IDPs were cough, diarrhoea, fever, malaria, respiratory tract infections and skin diseases.[75] Shortage of qualified health workers and proper case diagnosis made it difficult to determine the true disease prevalence especially for malaria which was often diagnosed based on the presence of fever as opposed to recommended methods like microscopy.[37]

Multiple infectious disease outbreaks were reported across some IDP camps. In April 2015, there were about 50 per 1,000 diarrheal cases weekly in Malkohi camp, in Adamawa state.[37] Between January to September 2016, 3,905 suspected cases of measles were identified in four conflict locations in the north-east; however, only 129 cases were confirmed through laboratory testing.[82] Furthermore, cholera outbreaks in 2017 affected thousands of IDP and non-IDPs in conflict areas.[83] Other outbreaks also reported in IDP locations have included Lassa fever, hepatitis-E, meningitis, and polio.[84–86]

Vaccination coverage in the northern zone, especially in the north-east, before the conflict was very poor.[87] As of 2014, the proportion of children who had received all basic vaccinations was 14.2%, while 45.3% of children had never received any type of vaccination.[87] In most areas, the conflict crisis resulted in low-to-zero immunisation coverage and generated major public health concerns.[75,87] Furthermore, the conflict disrupted and severely threatened the country's National Expanded Program on Immunisation (EPI) and the

advances already made against vaccine-preventable diseases (VPDs). For example, after Nigeria was declared polio-free for two years, the re-discovery of the wild poliovirus disease within an IDP location in 2016 presented a major setback.[50,88,89]

Management of HIV and other chronic illnesses, for example, diabetes and hypertension, have been largely neglected among the IDPs. Affected IDPs were usually off medication for long periods, and this had a significant impact, such as the increased spread of HIV infections.[37] Furthermore, women were reported to been disproportionately affected, as over a million women of reproductive age had no access to reproductive health services including obstetric care, and prevention and treatment of STIs.[75] Most of this information were however generally from review because, to date, no study has investigated the association between IDP health management and outcomes.

General health screening and service accessibility were limited. Where implemented, screening primarily focused on malnutrition and sometimes only when the IDPs first arrived on the camps. Also, disease monitoring and infection management were rarely reported. These domains are of particular importance because reported outbreaks were sometimes attributed to the movement and influx of IDPs.[90]

Access to adequate food supplies was the biggest unmet need among the IDPs. As described by Messer et al., conflict is both a cause and effect of hunger, and the link between the two factors is the loss of food production.[91] Subsistence farming was the primary source of food and livelihood in the north-east, and the crisis had severely disrupted that. In 2016, food shortage

mostly affected children and this contributed to the increase in severe acute malnutrition (SAM).[75] Female-led households were reported to be more likely to have poor food consumption. In addition, host communities were also affected by the food shortages, as increased IDP migration depleted the local resources.[75]

Water sources accessed by IDPs were usually protected or unprotected wells, boreholes, lakes or surface water. Most of these were unhygienic and had unpleasant tastes and smells. However, some locations had no direct water source on site. Toilet facilities were sometimes considered "unusable"[92] and general solid waste management was rarely available.

Combination of all these challenges showed several needs were unmet. Also, the observations illustrated broader complications resulting from the Boko Haram conflict within the country.

1.2.3 IDP management in Nigeria

The national authority actively managing IDP issues in Nigeria was the National Emergency Management Agency (NEMA) and its state subsidiary, the State Emergency Management Agency (SEMA). NEMA was established in 1999 to formulate policy, monitor and coordinate all disaster management, as well as organise and provide relief for disaster victims.[93]

Only IDPs living in formal camps or camp-like settings were managed directly by these national authorities.[13] Also, most sites had IDP leadership committees responsible for day-to-day activities.[75] Irrespective of the camp statuses, IDP management processes were unstable, and most camps were managed solely by IDPs who had no relevant skills or training.[75]

Information on health management within the affected crisis region in the country was lacking. Most health interventions were provided by local and international non-governmental organisations (NGOs).[73,94–96] However, in 2016, about 60% of camps in Borno state had no health partner support,[75] and no reports were available for the other affected states.[97] Previous studies have associated these management gaps to negligence from the national government, especially on issues related to providing functional policies, monitoring and humanitarian support.[65,97–100]

1.3 Public health management in displacement conditions

Public health promotion in emergencies emphasises the need for planned and systematic approaches in the provision of clean water, sanitation, vector control, essential items, information and learning opportunities.[101] Although these have been acknowledged, it is often done differently and rarely achieved in CHEs.[22,46]

Toole and Waldman summarised the three main public health prevention areas for CHEs, as described below.[9]

- **Primary Prevention:** Includes stopping the violence or keeping IDPs away from locations of active conflict and the provision of immediate needs including adequate shelter, food, potable water, sanitation, and timely immunisation
- **Secondary Prevention:** Involves the early detection of conflict-related food scarcity, population movements, preparedness for public health mitigating interventions, and the development of health workers for effective emergency setting management.

- **Tertiary Prevention:** Involves the prevention of excess mortality and morbidity once a disaster has occurred and includes the implementation of interventions to tackle identified health problems that consistently cause illnesses and deaths, and also focuses on demographic groups most at risk.

Due to the evolving nature of CHEs, Médecins Sans Frontières (MSF), an international humanitarian organisation, listed ten top priorities to be addressed during displacement emergency phases.[17] These items can be carried out simultaneously, and they complement the three core public health prevention areas listed above. The ten priority areas include initial assessment; measles immunisation; water and sanitation***;*** food and nutrition; shelter and site planning; healthcare; control of communicable diseases and epidemics; public health surveillance; human resources and training; and coordination.

1.4 Global and Regional IDP management

To ensure effective management, partnership and coordination of IDP related matters, various policies and guidelines have been developed.

1.4.1 Guiding Principles on Internal Displacement

The Guiding Principles are a set of values that address the needs of IDPs.[102] The principles give an overview of IDP rights and the responsibilities of both national authorities and non-governmental groups based on Human Rights and International Humanitarian Law. Although governments of affected countries are primarily responsible for managing internal displacement, they are not bound by law to follow the policy.

Text Box 1.2 – Guiding Principles on Internal Displacement

Guiding Principles on Internal Displacement

These were established in 1998 by the Office for the Coordination of Humanitarian Affairs (OCHA). There are 30 principles, grouped under 5 sections, which outline the rights of IDPs to access relevant protection and humanitarian assistance during and after displacements.

The 18th Guiding Principle states that all IDPs have the right to a minimum standard of living, irrespective of their circumstances and provisions should be made without discrimination.[102] These minimum requirements included access to essential food and potable water; basic shelter and housing; appropriate clothing; and essential medical services and sanitation.

1.4.2 The Handbook for the Protection of Internally Displaced Persons

The handbook presented guidance on the core concepts, principles and international legal standards for the protection of IDPs.[5] The document was primarily intended for use by international organisation field staff engaged in responding to internal displacement, but can also be used by managing national authorities and local supporting organisations.

Text Box 1.3 – Handbook for the Protection of Internally Displaced Persons Toolkit

Handbook for the Protection of Internally Displaced Persons

A handbook that provides operational guidance, tools and references for effective protection responses in internal displacement situations.

The guide is divided into six parts that cover: protection foundations; required skills; protection response building; prevention, mitigation and response to specific protection risks and rights violations; protection activities; and durable solutions. Identified risks to IDP protection within the handbook included forced displacement, shelter, food aid and nutrition, water and sanitation, hygiene (WASH), HIV prevention and treatment, education, and livelihoods.

Guidance on the legal framework for IDP protection, role, and the response of international collaboration for humanitarian action was discussed in-depth. In addition, responsibility and protection framework for national authorities, and the impact of their engagement were extensively elaborated.

1.4.3 The Camp Management Toolkit (CMT)

This toolkit focused on all camp coordination and management requirements and contained a broad range of resources.[13] These included assessment tools, case studies, reports, and reference materials. A fundamental recommendation for using the toolkit was to adapt the resources to individual settings of interest.

Text Box 1.4 – Camp Management Toolkit

Camp Management Toolkit
Document which presents a wide range of relevant information on managing displaced populations living in communal settings.

The toolkit addressed all factors related to the management of camp settings under four areas:

- ***Camp management*** (key information and related roles and responsibilities).
- ***Core management tasks*** (community participation, information management, environment and camp set-up/closure).
- ***Safe environment*** (protection, registration and profiling, gender-based violence, protection of persons with specific needs, safety and security).
- ***Camp services*** (food security and non-food items, WASH, shelter, health and nutrition, education, and livelihoods).

1.4.4 The Sphere Handbook

The Sphere Handbook was designed for use during humanitarian responses in a range of situations, including natural disasters, conflict, and complex political emergencies.[47] The handbook outlines the minimum standards for best practice in humanitarian response and takes into consideration factors such as demography, size, location, climate, stage of an emergency, social and culture norms.[17,47]

Text Box 1.5 – Sphere Minimum Standards

> ***Sphere Minimum Standards***
> *Outline of recommended standards to improve the quality of humanitarian response and enhance accountability to disaster-affected people.*

The handbook is a practical expression of the principles and rights embodied in the Humanitarian Charter, and it is also related to the Guiding Principles.

In the 2011 version of the handbook, there were 40 minimum standards and sub-standards grouped under four sectors: WASH promotion; food security and nutrition; shelter, settlement and non-food items; and health action.[47] The standards were in qualitative format, and each had a set of guidelines for needs assessment, key actions, indicators, guidance notes and resulting adverse implications if unmet

1.4.5 African Regional IDP Policy – The Kampala Convention

African Union Heads of State and Government adopted the Convention for the Protection and Assistance of Internally Displaced Persons at the Special Summit on Refugees in 2009.[103] This document also known as the “Kampala Convention” was developed with the primary objective of providing sustainable solutions for internal displacement issues in the African region.

The agreement presents a legal framework for addressing internal displacement issues which include prevention, response, and durable solutions. It also outlines the obligation and responsibilities of the affected country national authorities and other relevant stakeholders like civil societies and humanitarian agencies.

Although Nigeria signed and formally consented to these policies in 2012, the policies have not yet been enacted in the country.[65,104]

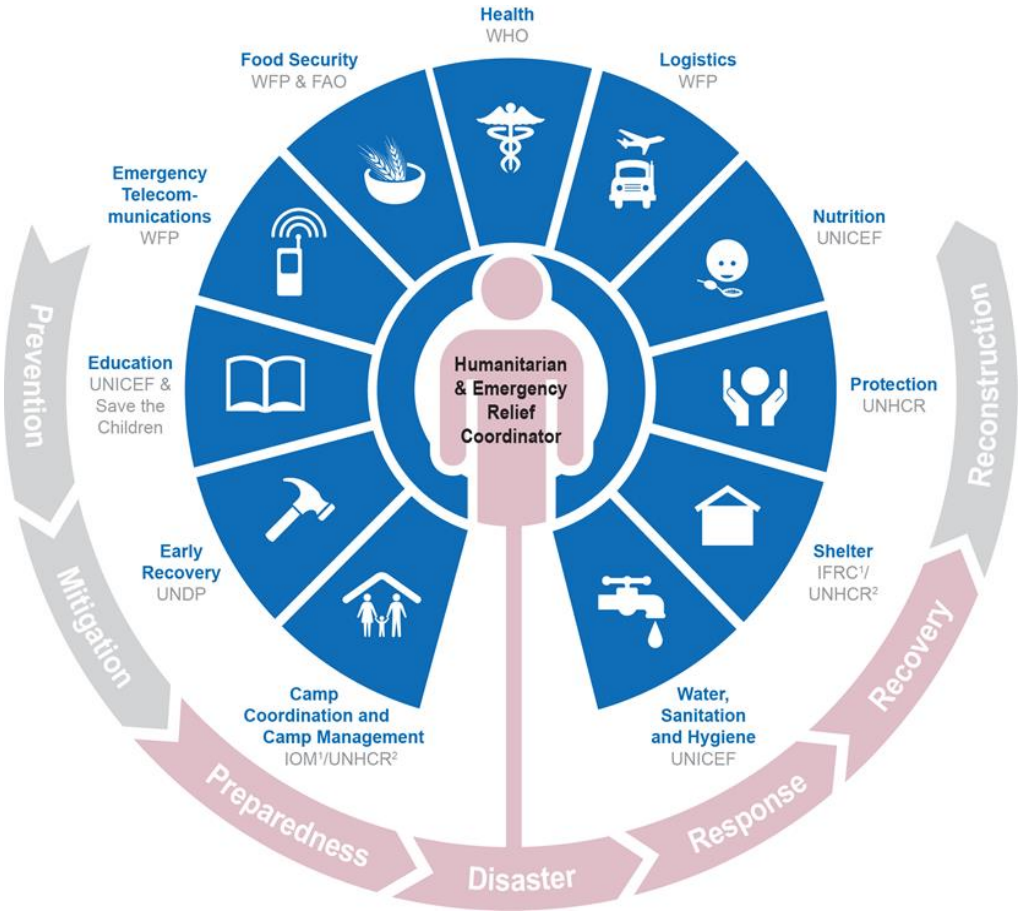
1.4.6 Global actors in internal displacement

The number and types of organisations involved in CHEs vary depending on need, location, and crisis. These organisations contribute to IDP program interventions, administration, and implementation; and usually differ in size, technical expertise, resources, and willingness to interact.[105] Standardised guidelines and procedures, similar to those within the CMT and Sphere Handbook, help make coordination easier.

When humanitarian crises occur, the United Nations (UN) Office for the Coordination of Humanitarian Affairs (OCHA) teams within the affected country; and together with the country's government establishes coordination groups called "clusters".[105] These clusters are made up of different sectors (e.g. food, shelter, etc.) and include both UN and non-UN organisations. Establishment of a sector is needs-based rather than capacity-driven. Each cluster has a lead agency who facilitates and coordinates responses by mapping out key emergency priority areas and supporting the affected nation's capacity. This approach enhances good coordination, minimises gaps and reduces duplication of efforts.

The global cluster lead for conflict situations is the United Nations High Commissioner for Refugees (UNHCR), whereas the International Organisation for Migration (IOM) is responsible for natural disasters **(Figure 1.5)**. The World Health Organisation (WHO) leads the health sector cluster and serves as a bridge between the national health authorities and non-governmental humanitarian health actors.[106]

Figure 1.5 – Illustration of the humanitarian cluster coordination sectors



Source: Humanitarian Response Website[107]

1.5 Nigeria National IDP management and humanitarian response

In Nigeria, NEMA represents the national government and collaborates with IOM and UNHCR. Over 50 different organisations have been noted to support the country during the Boko Haram displacement crisis. However, this management was not guided by a national IDP policy,[65,108] but instead was more informed by the Nigerian Humanitarian Response Plans (HRPs).[73,94–96]

1.5.1 Nigerian National Policy on Internal Displacement

The developed draft Nigerian IDP policy was adopted from the Guiding Principles on Internal Displacement, Sphere Minimum Standards, and the Kampala Convention.[108] The draft document was finalised in 2012, but till date has not yet been adopted by the government.[109] Consequently, there was no mandate biding or guiding institutions neither was accountability enforced.[110,111]

The policy outlines the rights of different groups of IDPs; responsibilities of the government, humanitarian agencies, host communities and armed groups; policy implementation framework and strategies; and funding, monitoring, and evaluation.

Basically, the policy aimed to provide a framework for national responsibility and accountability towards preventing and mitigating the impact of internal displacement. The draft document also allocated responsibilities to different government sectors; and proffered guidance to donors and humanitarian agencies on various aspects including short, medium and long term responses.

1.5.2 Nigerian Humanitarian Response Plan (HRP)

The Nigerian HRPs are the framework used to integrate all humanitarian response activities in the country.[73,94–96] The Nigerian government leads the joint humanitarian response and is responsible for providing a workable environment. Since the crisis started, the volume of partners involved in managing the displacement crisis increased over time, despite the reduction in number of prioritised IDP settlement states.

A common theme in the HRPs across the years has been the elevated health needs due to high prevalence of severe malnourishment, morbidity, and mortality. Other factors, such as lack of basic shelter, water, latrine, and bathing facilities were also noted as areas of major concern. The discovery of four confirmed polio cases in Borno in August 2016 further highlighted the need for more health interventions. Hence, the 2016 HRP indicated the urgent need for an epidemic response plan for major communicable diseases including cholera, diarrhoea, measles, and meningitis.[96]

The 2017 HRP outlined the urgent need for life-saving integrated basic primary healthcare services such as management of life-threatening and other non-communicable diseases, immunisation and referral services.[73] On the other hand, the 2018 HRP reported that the protracted nature of the crisis created new needs which require longer-term assistance.[95] With the reduction and stabilisation of intense conflict and new displacements, the most recent HRP developed at the end of 2018 covers three years, 2019-2021.[112]

Despite the HRP organised framework, management of IDPs and provision of humanitarian support have generally been poor and most IDPs unreached.

This has especially been the case after mid-2016 when the monitored areas reduced from 13 to 6 states.

1.6 PhD research scope

With over 182 million people, Nigeria, which has some of the poorest health indices especially for child and maternal mortalities, is a region of significant concern. Despite increased global attention and support, health services in the country remain inadequate and present several public health problems. Efforts to improve these have continually been undermined by a variety of structural and institutional weaknesses, and recently further compounded by the Boko Haram conflict crisis.

The widespread humanitarian situation from this crisis was unexpected, and the country was unprepared to manage the outcomes. Despite currently being in a post-emergency phase, a combination of the outlined public health issues and their related impacts led the WHO to categorise the emergency in Nigeria as a "Grade 3".[113] Grade 3 emergencies are those requiring significant international and WHO responses.[114]

Although the country had previously encountered several conflict-induced displacements, with IDPs scattered across different locations, it had never faced any crisis for such a protracted length of time, or at the same magnitude since the civil war (Biafra war) in 1967-1970.[65,66] Therefore, in the absence of a guiding national policy, very little evidence and informed guidance were available for managing the current IDP situation.

Research on IDPs from the Boko Haram crisis revealed the major challenges faced by IDPs had been lack of access to needed resources.[97,100,115–117]

However, no study has assessed the availability of resources in relation to international standards and their association to the IDP health outcomes. Furthermore, the few studies on IDP management in Nigeria were either reviews, comparative studies with other countries or focused on humanitarian rights and protection.[118–120] Till date, no research study has explored both the camp and health management in relation to the general health and wellbeing of IDPs. Similar gaps in management information have also been observed at a global level, despite the widespread IDP challenges. This information is fundamental and is required to provide effective and efficient humanitarian support.

Availability and accessibility of health-related services are crucial for vulnerable groups such as IDPs. This is of particular importance in regions with extremely poor health indices like the northern region of Nigeria. Consequently, the complexity arising from issues related to IDPs in Nigeria call for more detailed research, especially with respect to health management processes. To achieve this, assessments of the health of IDPs and review of available resources and management approaches from different viewpoints are necessary. Outcomes from these would contribute unique perspectives to the current IDP health management knowledge. Similarly, the findings can also be used to further inform the draft national IDP policy, enhance efficient decision-making, planning, implementation and evaluation of interventions provided to displaced populations. Within this context, assessing the health status, gaps, related health indicators and management process for IDPs is pertinent to ensuring an in-depth understanding of IDP management.

Studying the displacement crisis in Nigeria is also of significant global importance. With the high proportion of young people in the country and impact from the crisis on economic growth and increased poverty levels, understanding the immediate and likely future consequences from the crisis is crucial.[72] An absence of this could lead to further complications and long-lasting adverse effects. Hence, audiences outside Nigeria interested in development dynamics could benefit from directly researching the Nigerian crisis, as opposed to reliance on secondary data and news media reporting and opinions.

As a result, this PhD thesis aims to investigate the availability of essential health-related services and the management processes implemented among Boko Haram affected IDPs living in camp-like settings, in Northern Nigeria. The research explored both general camp and health management processes from various perspectives, using different research methodologies.

1.6.1 Aims and Objectives

The overall aim of this research was to assess essential health-related services and management procedures among IDPs in Northern Nigeria.

The specific objectives for this research were as follows:

1. To estimate the burden of diseases and coverage of basic routine and essential vaccination among IDPs in northern Nigeria using an interviewer-administered survey questionnaire.
2. To assess the health-related services available to IDPs against national and international guidelines.
3. To explore the perspectives of relevant stakeholders on health service provision and management of IDPs using face-to-face interviews.

2 SYSTEMATIC REVIEW

2.1 Introduction

A systematic review was undertaken to investigate the essential healthcare services provided to IDPs affected by armed conflict in low and middle-income countries (LMICs). The review explored the common health interventions offered, observed outcomes, factors that influenced implementations, key organisations involved and the management approaches adopted.

As of December 2017, there were about 42 countries with over 20,000 IDPs.[8] The key challenges amongst these populations included the inability to access healthcare, education and humanitarian assistance due to insecurity; hence, there were desperate needs for food, medicines, and health services.

Generally, most challenges experienced by displaced populations are usually health-associated and related to communicable diseases, mental health, women and children.[121,122] Best public health practices for managing health and wellbeing are prevention measures, which are cheaper and more efficient compared to treatment of existing conditions.[123] Prevention approaches, which include screening, surveillance, education, immunisation, and pre-disease management,[123] are also most effective in humanitarian conditions.[124–132] Lack of these interventions contribute to excess morbidity and mortality.[33]

Fundamentals of all health interventions are based on the WHO eight core primary healthcare (PHC) components. These include disease prevention, health education; water and sanitation; food and nutrition; maternal and child health (MCH); immunisation; treatment and provision of essential drugs.[133] Each component is crucial in any humanitarian situation.

To provide adequate resources and design effective health interventions for IDPs, understanding the health conditions, needs, and services previously provided are essential.[134,135] Therefore, awareness of factors that affect implementation, uptake, and interruptions of interventions are important, especially in conflict-related CHEs. This review sought to appraise the health-related interventions offered specifically to conflict-induced IDPs with the aim to assess the distribution and impacts.

2.1.1 Review questions

Primary question:

- What essential healthcare services are provided to IDPs affected by armed conflict in low and middle-income countries (LMICs) and what outcomes have been observed?

Secondary questions:

- What factors influence health-related interventions for IDPs in conflict settings?
- Who are the key players involved in IDP health management?
- What management approaches are used for IDP healthcare?

2.2 Methods

The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.[136] Prior to performing the study, similar reviews were searched for, but none focusing on the population and locations of interest was found. The study protocol was registered on PROSPERO.[137] **(see Appendix 2.1)**

2.2.1 Eligibility criteria

The population of interest was IDPs in Low and Middle-Income Countries (LMICs) affected by conflict-induced humanitarian crises, specifically defined here as “armed conflict and violence”. Studies on refugees and asylum seekers, as well as IDPs from non-conflict crises such as natural disasters, were excluded. High-income countries were excluded as most humanitarian crises occurred in LMICs and the dynamic of intervention, needs, provision and implementation in LMICs were likely a bit different. The period of interest was 2000 to 2017. The year 2000 was chosen as the cut-off date because it was the year after the adoption of the global IDP policy in 1999.[4] There was no fixed comparator, but comparisons within the included studies were reviewed.

Interventions of interest were the eight core PHC components, as stated in the WHO alma-ata.[133] These were education; water and sanitation; nutrition; maternal and child health (MCH); immunisation; prevention of endemic diseases; treatment; and essential drug availability. Studies on clinical, medical and community-based interventions were included, but those focused primarily on social protection, for example, gender-based violence (GBV), were excluded.

Outcomes considered were intervention activities, coverage, and uptake of the services and/or resource utilisation amongst IDPs. Factors affecting intervention implementation, including management approaches, stakeholder involvement, and adopted strategies, were also reviewed. Only studies which included intervention outputs and health outcome data were included.

2.2.2 Information sources and search strategy

Searches were conducted in January 2018 using eight databases: CAB Articles, Embase, MEDLINE, PsyArticles, PsycINFO, Scopus, LILAC and Web of Science. Grey literature searches were also conducted across a range of humanitarian-related databases[138–142] and Google Scholar.

The final selection of papers was narrowed to only peer-reviewed publications, but a thesis publication was identified and included. Case reports and editorials were excluded because the majority lacked research rigour and sufficient intervention details, especially intervention designs. Also, most reports and editorials presented the same interventions at different time periods making it difficult to avoid duplications and capture the data required for the review.

The search approach used was broad rather than focused on specific locations and interventions. Subject headings based on four key concepts were used for searching each database and these were (i) target population-related terms (internally displaced* or displaced*); AND (ii); conflict disaster-related terms (e.g. conflict* or complex emergency*); AND (iii) PHC intervention related terms (e.g. health*, water*, nutri* OR food*). Only studies published in English language and focused on interventions implemented from the year 2000 were included. A sample of the full search strategy used in one database is provided in the appendix **(Appendix 2.2)**.

2.2.3 Study selection and data extraction

Citations from the search results were imported from the databases into Mendeley reference manager for screening based on the eligibility criteria. Duplicates were removed, and title and abstract assessments were conducted

for the remaining publications. Full-text reviews were then undertaken to identify IDP focused interventions and outcomes before the selection of included papers. References of related systematic reviews and, from the included and excluded full texts were examined for potentially relevant articles.

Data from all included studies were extracted into a spreadsheet. The key variables extracted included: author(s), year, affiliated organisations, geographic locations, crisis information, study objectives, sample population characteristics, intervention details and duration, study sites, study design, measured outcomes, limitations and challenges, research gaps, funding sources, study conclusions, recommendations and study quality. Data screening and extractions were conducted independently by two reviewers (WE and EA) and disagreements were resolved through discussions with a third reviewer (RM).

2.2.3.1 Included study quality assessment

Quality assessments were conducted using a customised checklist from the Critical Appraisal Skills Programme (CASP) **(Appendix 2.3).** The customised checklist, a blend of all relevant CASP checklists, had 15 criteria and was developed to assess all study types with a single tool. Each criterion was awarded one point and the final rating was based on the proportion of positive scores. Criteria not applicable to a particular study type were perceived as ‘not applicable’ and therefore not considered in the quality calculation. The quality scores (in percentages) were ranked using three levels: weak (0-39), moderate (40-79) and strong (80-100).

2.2.4 Synthesis of results

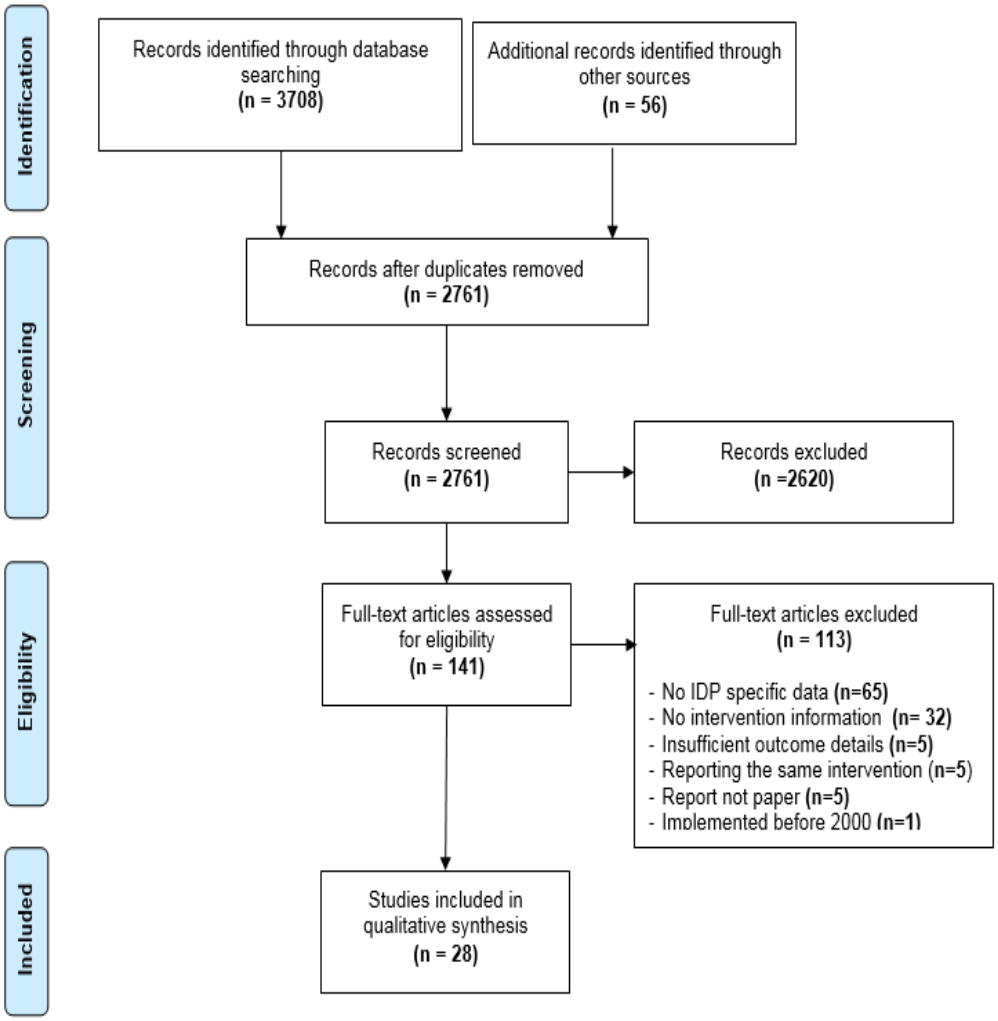
Data were synthesised using summary tables and descriptive narrative. The studies were widely heterogeneous in settings, interventions, and outcomes. Therefore, subgroup analysis and meta-analysis could not be conducted.

Extracted data were grouped according to the different PHC components as reported in the study. To increase the clarity of the final results, the findings were later and arranged into four main categories of evidence: disease prevention, food and nutrition, maternal and child health, and treatment.

2.3 Results

A total of 3,764 papers were initially identified, 3,708 from databases and 56 studies from scanning reference lists and grey literature searches. After removal of duplicates, titles and abstracts of 2,761 studies were screened and of these, 141 studies were eligible for full-text review. A total of 113 studies were removed because they either had no health intervention information, had interventions not focused on IDPs, or had not reported IDP specific data. The final number of papers included in this review was 28 **(Figure 2.1)**.

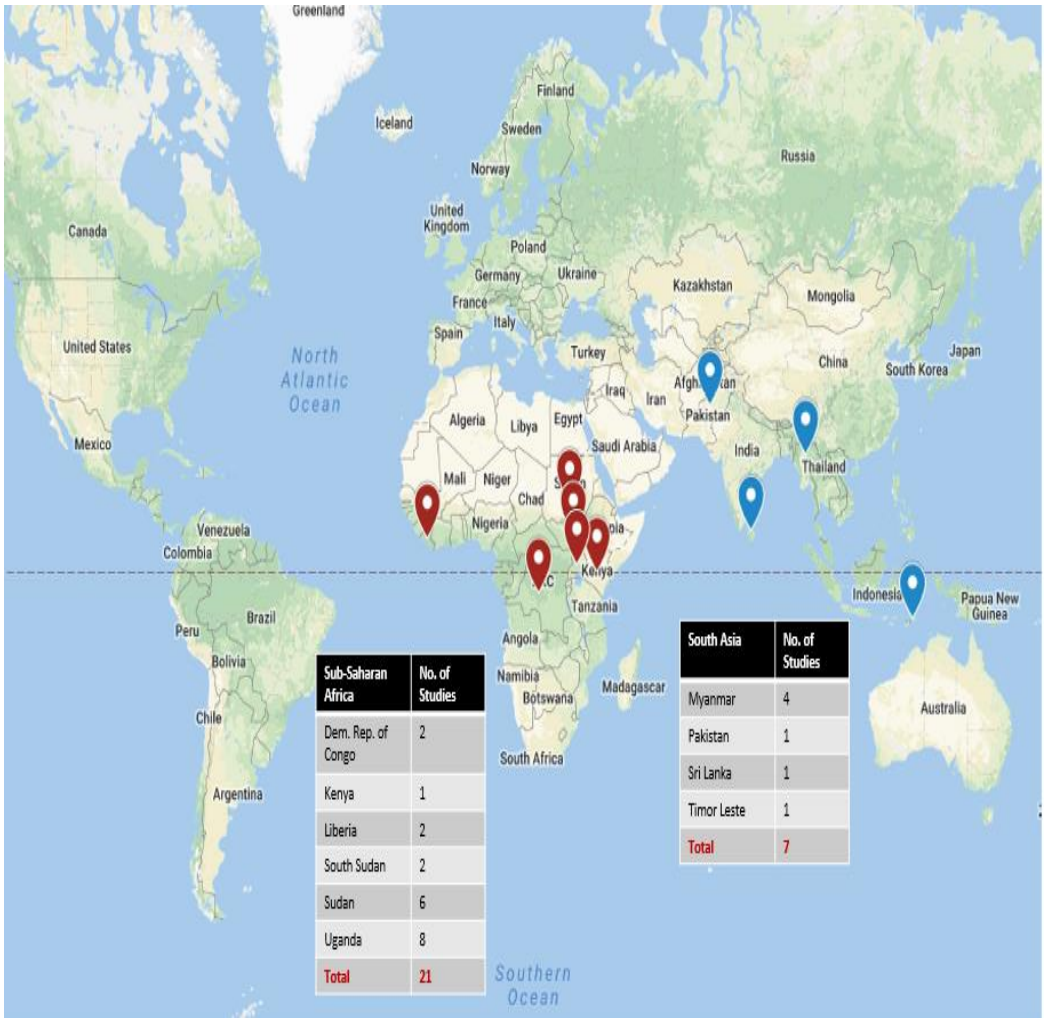
Figure 2.1 – PRISMA flow chart of the study selection process



2.3.1 Included study overview

All 28 studies were from countries within two regions: Sub-Saharan Africa (6 countries, 21 studies) and South-Asia (4 countries, 7 studies) **(Figure 2.2)**.

Figure 2.2 – Map showing countries represented in the studies reviewed



Sub-Saharan Africa	No. of Studies
Dem. Rep. of Congo	2
Kenya	1
Liberia	2
South Sudan	2
Sudan	6
Uganda	8
Total	21

South Asia	No. of Studies
Myanmar	4
Pakistan	1
Sri Lanka	1
Timor Leste	1
Total	7

Based on the PHC components, interventions in the selected studies focused on treatment (14 studies), [79,143–155] disease prevention (9 studies), [30,51,53,145,155–158], MCH (7 studies), [24,27,31,34,37,45,4] water and sanitation (4 studies), [51–53,159] essential drugs (3 studies),[143,148,152] immunisation (2 studies),[30,160] and health education (2 studies)[144,161] and food and nutrition (1 study)[78] **(Table 2.1).**

Some studies carried out multiple interventions. [30,51,161,53,79,144,145,147,152,155,160] Health education was integrated into most studies that created awareness,

while essential drug components were included in interventions offering medications to the IDPs. However, the primary interventions for each study were determined by the study objectives and the related outcomes reported.

Interventions using cross-sectional study designs were most common (12 studies), [30,52,79,144,145,151,152,158,161–163] while other observational studies, randomized,[150,154] cohort[143,153] and case-control studies,[51,147] were used in two studies each. A few studies were not explicit on the design used and were considered unclear.[146,155]Twenty studies were conducted either by or in collaboration with academic institutions,[30,51,52,143–145,148–151,153,155,158–165] seven studies were presumably written by the implementing organisations,[53,78,79,147,152,154,157] while one study did not declare any affiliation.[146]

Intervention study durations ranged from 1 week to 5 years, with a median of 3 months. Most studies were done in camps or clinical settings used by IDPs. Others were carried out among IDPs in communities or within settings not clearly described. Target populations were mostly all IDPs, but a few were specifically for women,[79,161–163] children,[78,150] or IDPs with specific health conditions.[149,151,153] There were no male-specific interventions, and most studies rarely reported male-focused outcomes.

Table 2.1 – Summary table of included study characteristics

Author Details	Affiliated Organisations	Country	Study Design	Study Period/Duration	Study Setting	Intervention Type	Target population
Adam 2016[161]	Academic	Sudan	Cross-Sectional	Feb 2007-April 2009 (26 months)	Clinics (PHC)	MCH Education	Women of child-bearing age
Bohler et al. 2005[149]	Multiple Academic (Includes: National Tuberculosis Program)	Sudan	Other	Jan-June 2000 (6 months)	Camps and Neighbouring community	Treatment	Tuberculosis patients
Bolton et al. 2007[150]	Multiple Academic (Includes: World Vision, War Child Holland)	Uganda	RCT	May-Dec 2005 (8 months)	Camps	Treatment	14 to17 years old
Cunningham 2011[165]	Academic	Sudan	Other (Mixed)	2011 (Can't tell duration)	Non-camp populations (displaced and residents)	MCH	Displaced women and residents
Doocy et al. 2006[51]	Academic (Johns Hopkins University Center for Refugee and Disaster Response)	Liberia	Case-Control	July-Sept 2004 (3 months)	Camps	Water and Sanitation, Disease Prevention	<5 children
Elsanousi et al. 2009[52]	Academic (Includes: Ministry of Health (MoH))	Sudan	Cross-Sectional	Nov 2006-June 2007 (8 months)	Camp	Water and Sanitation	All residents >2years old
Garang et al. 2009[151]	Academic	Uganda	Cross-Sectional	Jan-Feb 2008 (2 months)	Hospital	Treatment	Adults (>=18 years) receiving ART
Goodrich et al. 2013[148]	Academic	Kenya	Other (Case study)	Oct 2007-Mar 2008 (6 months)	Clinic	Treatment	HIV patients
Hamze et al. 2016[143]	Academic	Dem. Rep of Congo(DRC)	Cohort	Nov 2013-Jan 2014 (3 months)	Clinic	Treatment	<5 years of age
Huhn et al. 2006[30]	Multiple non-academic (CDC, WHO, UNICEF, MSF, MoH)	Liberia	Cross-Sectional	Feb-Apr 2004 (3 months)	Camps	Immunisation, Disease Prevention	Household

Humayun et al. 2016[146]	Not stated	Pakistan	Can't tell	6 months	Unclear	Treatment	IDP and Residents
Jayatissa et al. 2012[78]	MoH	Sri Lanka	Can't tell	Dec 2006-Apr 2009 (16 months)	Camps	Food and Nutrition	Children <5 years
Kim et al. 2009[79]	CDC	Dem. Rep of Congo (DRC)	Cross-Sectional	Feb-Apr 2005 (3 months)	Camp and Surrounding populations	MCH Treatment	Women aged 15-49 years
Kolaczinski et al. 2006[152]	Malaria Consortium	Uganda	Cross-Sectional	12-19 Sept 2005 (1 week)	Camps	Treatment, Essential Drugs	Caretakers
Lee et al. 2009[155]	Academic (Includes: Global Health Access Program, MoH)	Myanmar	Not stated	2003-2008 (5 years)	Not clear	Disease Prevention, Treatment	IDP-VHW and General population
Morris et al. 2012[147]	Multiple (Includes: WHO, IMC, MCH Integrated Program, HealthNet TPO)	Uganda	Case-Control	May 2007-Jan 2008 (9 months)	Community-based	MCH, Treatment	Mothers-children pair
Mullany et al. 2010[163]	Multiple (Includes: Academic and Global Health Access Program)	Myanmar	Cross-Sectional	2005-2008 (3 years)	General Community	MCH	Ever-married women of reproductive age 15-49 years
Nakimuli-Mpungu et al. 2013[153]	Academic (Includes: Peter C. Alderman Foundation)	Uganda	Cohort	Aug-Dec 2011 (4 months)	Clinic	Treatment	Adults with war trauma history
Peprah et al. 2016[160]	Academic and WHO	South Sudan	Qualitative	Feb-Apr 2014 (3 months)	Camps	Immunisation, Disease Prevention	Adults
Pinto et al. 2005[157]	WHO	Sudan	Not stated	Apr-June 2004 (3 months)	Camps	Disease Prevention	All IDPs
Richards et al. 2009[144]	Academic (including Global Health Access Program)	Myanmar	Cross-Sectional	Feb 2003-Jan 2005 (27 months)	Clinics	Disease Prevention, Treatment Education	All IDPs

Sami et al. 2017[162]	Academic	South Sudan	Cross-Sectional	Apr-June 2016 (3 months)	Camp clinics	MCH	357 mothers recruited
Sonderegger et al. 2011[154]	Family Challenge Australia	Uganda	RCT	September 2006 (1 month)	Camps	Treatment	202 participants
Spencer et al. 2004[158]	Academic (Includes: MSF, Epicenter, MoH)	Uganda	Cross-Sectional	July 2002 (1 month)	Camps	Disease Prevention	All IDPs
Steele et al. 2008[159]	Academic	Uganda	Can't tell	July 2007 (1 month)	Camps	Water and Sanitation	Households
Walden et al. 2005[53]	Oxfam	Sudan	Can't tell	May-July 2004 (3 months)	Camp	Water and Sanitation, Disease Prevention	Households
Wayte et al. 2008[164]	Academic	Timor-Leste	Other	Sept 2006-Feb 2007 (6 months)	Community	MCH	General
Zhou et al. 2016[145]	Academic	Myanmar	Cross-Sectional	Apr 2011-Dec 2014 (40 months)	Camps/Community Clinics	Disease Prevention, Treatment	IDP and Resident Households

2.3.2 Study focus

Conflicts in most of the studies had been ongoing for over 20 years, for instance in Uganda,[147,150–152,154,158,159] the Democratic Republic of Congo (DRC)[79] and Myanmar;[155] and IDPs in a few locations had experienced multiple displacements, e.g. in Sri Lanka[78] and DRC **(Table 2.2)**.[79] The leading causes of the crises were conflicts between rebel groups and the government. Consequences of the conflicts included mass human displacement, human right abuse, destruction of infrastructures, people living in camp settings, inadequate access to resources, poor environment, weak security, loss of livelihood, reliance on outside aid, and escalation of already existing challenges such as droughts.[53,149]

Statistical information for the various IDP crisis and settlement factors varied but were often very high. For example, in Uganda the highest number of IDPs reported reached about 4 million,[149] also there were up to 200 camps[147] and some housed up to 30,000 IDPs.[158] A few of these camps had existed for over 20 years.[151] In Liberia, about one-sixth of the country's population, had lived in IDP camps at some point due to conflicts.[30] In all locations the most affected groups were women and children, for example, both groups accounted for up to 74% of IDPs in Pakistan.[146]

Health-related impacts from the conflicts included high mortality and disease morbidity, infectious disease outbreaks and epidemics, high rates of poverty, malnutrition, mental health issues, high fertility rates, poor maternal and child healthcare, weaken healthcare systems and shortage of health workers. Mortality among IDPs was observed to be about 5.5 fold higher compared to the average national rates.[143] Common infectious disease outbreaks and

epidemics reported included cholera, shigellosis, TB, fever, malaria, and measles. These diseases occurred more in densely populated camps.[30] In respect to NCDs, the most common issues reported were mental health-related and this included conditions like depression, anxiety and post-traumatic stress disorder (PTSD).

The specific interventions implemented under each PHC components in the included studies are shown below:

1. **Disease prevention:** Surveillance[157]; Malaria control[144,145,155,158]; Water treatment[51–53,159]
2. **Education:** Health education[144,161]
3. **Essential Drugs**: Malaria[143,152]; HIV[79,148,151]
4. **Food and Nutrition:** Food distribution[78]
5. **Immunisation:** Yellow fever[30]; Cholera[160]
6. **Maternal and Child Health (MCH):** MCH feeding[147]; Sexual and Reproductive health[164]; Newborn health[162]
7. **Treatment:** HIV[79,148,151]; Malaria[143–145,152,155]; Tuberculosis (TB)[149]; Mental health[146,147,150,153,154]
8. **Water and Sanitation:** Water treatment[51–53,159]

Primary aims of the studies included identifying, assessing and testing intervention strategies, as well as documenting experiences and healthcare system strengthening. Health risk factors and those associated with intervention uptake and health service delivery were also identified. The wider focus of the interventions included assessing implementation effectiveness, response, acceptability, and perceptions. The overall goal of most authors was to provide evidence to guide future work in similar humanitarian settings.

Table 2.2 – Summary table for crisis information and intervention study aim

Author Details	Country	Conflict Start/Period	Crisis and Health Impact Information	PHC Component	Intervention
Adam 2016[161]	Sudan	2003	High MMR of 1,056/100,000 deaths per live births. High fertility rate, poor prenatal care, and poor perinatal outcomes among married IDP women.	MCH, Education	Reproductive health
Bohler et al. 2005[149]	Sudan	20 years	Civil war and periods of drought led to 4 million IDPs. IDP TB prevalence estimated at 120 sputum smear-positive/100,000 compared to 90/100,000 for the settled population.	Treatment	Tuberculosis Programme
Bolton et al. 2007[150]	Uganda	20 years	Conflict between government and rebel group. Over 1.8 million IDPs, human rights abuses, including mass violence, rape, and abduction of over 25,000 children.	Treatment	Mental health
Cunningham 2011[165]	Sudan	NOT STATED	Violence against women caused long-lasting reproductive health consequences.	MCH	Reproductive Health
Doocy et al. 2006[51]	Liberia	NOT STATED	Total of 532,000 IDPs, 200,000 IDPs in camps, and 335,000 refugees Cholera epidemic reported. 19% of deaths attributed to diarrhoea.	Water and Sanitation, Disease Prevention	Water treatment
Elsanousi et al. 2009[52]	Sudan	NOT STATED	NONE STATED	Water and Sanitation	Water treatment
Garang et al. 2009[151]	Uganda	20 years	HIV prevalence in the conflict areas about 8.2%, above the national prevalence of 6.7%. Most IDPs living in camps for 20 years.	Treatment	HIV treatment
Goodrich et al. 2013[148]	Kenya	2007	Violence after presidential elections. 1,133 deaths, 78,000 homes destroyed, 660,000 displaced, and 350,000 in IDP camps.	Treatment, Essential Drugs	HIV Care
Hamze et al. 2016[143]	DRC	NOT STATED	Conflict violent deaths increase 5.5-fold, malaria-specific mortality increased 3.5-fold. Selected camps existed for over 4 years.	Treatment, Essential Drugs	Malaria

Huhn et al. 2006[30]	Liberia	1989 - 2003	Devastated country healthcare infrastructure, surveillance and immunisation programs. Yellow fever outbreak, 50% of cases from IDP camps. 365,000 (one-sixth country population) had lived in IDP camps. Selected camps established in 2002.	Immunisation, Disease Prevention	Yellow fever vaccination
Humayun et al. 2016[146]	Pakistan	2007	Scarcity of formal health facilities contributed to the country having the highest number of polio cases globally in 2014. Over one million people (74% women and children) displaced.	Treatment	Mental health
Jayatissa et al. 2012[78]	Sri Lanka	NOT STATED	Peace treaty implemented in 2001, conflict re-emerged, many displaced and IDP camps established. Many repeatedly displaced within 5 years. Also, affected by the 2004 tsunami (natural disaster).	Food and Nutrition	Food distribution
Kim et al. 2009[79]	DRC.	1998 - 2003	Multi-country conflict led to 3.9 million deaths and 2.2 million IDPs. 5% of pregnant women attend antenatal clinics. Conflict contributed to high HIV prevalence.	MCH, Treatment	HIV treatment
Kolaczinski et al. 2006[152]	Uganda	18 years	Conflict between government and rebel group. Over 2 million displaced and live in IDP camps. Gulu district had 460,000 IDPs in 53 recognised camps. Main cause of death in camps was malaria/fever in <5 years, comprising 25.3% mortality	Treatment, Essential Drugs	Malaria
Lee et al. 2009[155]	Myanmar	Decades	Acute malaria mortality and case fatality rate where 500,000 were displaced. Malaria, 20-25% of overall morbidity in IDP zones. Prevalence among IDPs in higher than populations across the border.	Disease Prevention, Treatment	Human resources (Malaria)
Morris et al. 2012[147]	Uganda	Over 20 years	Conflict between government and rebel group. Over 10,000 deaths and 2 million displaced and living in 200 camps. High malnutrition and most depended on food aid. Infant mortality in region 165/1,000 live births, double national rate (88/1000).	MCH	MCH Feeding Mental Health
Mullany et al. 2010[163]	Myanmar	NOT STATED	Conflict between state development council and ethnic minority resistance groups led to widespread human rights abuses.	Maternal and Child Health	MCH
Nakimuli-Mpungu et al. 2013[153]	Uganda	1987 - 2008	Two decades of civil wars. High prevalence of depression and post-traumatic stress symptoms.	Treatment	Mental health
Peprah et al. 2016[160]	South Sudan	2013	Two United Nations bases to be used to house 30,000 IDPs High risk of cholera from high population density, inadequate water and sanitation facilities and seasonal rains.	Disease Prevention	Cholera vaccination

Pinto et al. 2005[157]	Sudan	2003	1.3 million people affected (1million IDPs, 100,000 residents and 200,000 refugees). Precarious food security situation. Most common health events were acute respiratory infections, diarrhoea, malaria, measles, and war injuries	Disease Prevention	Surveillance
Richards et al. 2009[144]	Myanmar	NOT STATED	526,000 IDPs and over 240 villages destroyed, forcibly relocated, or abandoned. Mortality rates above national (Infant: 89/1000; and child: 218/1000 live births). Restrictive policies constrained humanitarian activities. 95,000 IDPs relied on 32 clinics.	Disease Prevention, Treatment, Education,	Malaria control
Sami et al. 2017[162]	South Sudan	NOT STATED	Shortage of health workers, limited training institutions and data on the quality of facility-based newborn health services. Most managed by international organisations.	MCH	Newborn health services
Sonderegger et al. 2011[154]	Uganda	20 years	Conflict between government and rebel group impacted psychosocial functioning. Widespread attacks on communities over 25,000 children abducted1.8 million IDPs and many placed in camps.	Treatment	Mental health
Spencer et al. 2004[158]	Uganda	1996	Atrocities committed against civilians displaced people. Sheltered around 137,000 IDPs in 63 camps. Camp size ranged from 420 to 30,000 people.	Disease Prevention	Malaria prevention
Steele et al. 2008[159]	Uganda	Over 20 years	Conflict between government and rebel group. Between 1.6 - 2.0 million IDPs, about 75% in camps. Other 25% moved to temporary satellite settlements which had improved living conditions and greater access to farmland. Outbreaks of Cholera confirmed twice in 2 years	Water and Sanitation	Water treatment
Walden et al. 2005[53]	Sudan	2003	History of both internal conflict and drought. As of mid-2005, 700,000 IDPs and 130,000 have fled to Chad. Shigellosis outbreak confirmed in June 2004.	Water and Sanitation, Disease Prevention	Water treatment
Wayte et al. 2008[164]	Timor-Leste	2006	Internal conflict: 150,000 displaced (15% of country population), 3,000 homes destroyed, 70,000 IDPs in camps across the city and 75,000 displaced to rural districts. Violence was most intense in the capital	MCH	Sexual and Reproductive Health
Zhou et al. 2016[145]	Myanmar	2011	Conflict between government and rebel group. Hundreds of thousands to flee their homes and move into IDP camps along the China–Myanmar border established in July 2011.	Disease Prevention, Treatment	Malaria control

2.3.3 Study intervention approach and methods

Table 2.3 shows a variety of intervention approaches and methods were used across the selected studies. Considering a few PHC components overlapped, the interventions were grouped under four areas: disease prevention, food and nutrition, MCH, and treatment.

2.3.3.1 Intervention approach

2.3.3.1.1 Disease prevention

Most disease prevention studies were carried out in Africa. Water treatment studies focused on water filtration and decontamination of household[51,53,159] or individual[52] water storage vessels. Immunisation interventions focused on health education and mass immunisation campaigns of vaccine-preventable diseases (VPDs).[30,160] In the only disease surveillance study, an Early Warning System (EWS) was established using an already existing national communicable disease surveillance system.[157] The core purpose of the EWS was to detect possible and occurring disease outbreaks, and the use of an existing national system made establishment and adoption of the intervention quicker.

2.3.3.1.2 Food and nutrition

Only one study was identified under the food and nutrition component, and the study used a community food distribution technique.[78] The intervention also included an MCH element and focused on community-based management of acute malnutrition for children <5 years. The intervention program reached out to public places, including schools and religious institutions. The study was implemented in 6-phases and was also integrated into the routine healthcare system.

Another study in this review which had a nutrition component focused primarily on maternal mental health interaction with infant feeding.[147] The study, however, did not present any feeding outcomes; hence, was only included in the mental health category under the treatment section.

2.3.3.1.3 Maternal and Child Health (MCH)

MCH interventions included sexual and reproductive health (SRH) programs. This included a mixture of community[79,161,163] and clinical[53,162,164,165] based interventions. Activities in this category were broad and included family planning (FP), obstetric care (pregnancy, childbirth, and postpartum periods) and emergency care. There were no SRH-related interventions reported for men and adolescents. A key guideline mentioned for SRH program was the Minimum Initial Service Package (MISP),[161] which is a series of crucial actions required to respond to reproductive health needs during humanitarian crisis[166].

2.3.3.1.4 Treatment

Studies on treatment interventions focused mostly on malaria[143–145,152,155] and mental health[146,147,150,153,154]. Other diseases observed were HIV[79,148,151] and Tuberculosis (TB)[149].

Malaria studies included community and clinical interventions, and frequently adopted integrated approaches that included prevention, control, treatment, and case management. For malaria prevention, the most common method was the use of insecticide-treated nets (ITNs) or long-lasting insecticide-treated nets (LLITNs). Malaria treatment included screening for infected cases using rapid diagnostic tests (RDT) and treatment using artemisinin-based combination therapy (ACT). Two studies also focused on health workers and

groups of people involved in malaria management and medication distribution such as community drug distributors (CDDs) and caretakers.[152,155]

The one TB intervention study, was clinically based and the IDP activity package was integrated within the existing National TB program.[149] The program was centred on the internationally recommended strategy for TB control, the WHO Directly Observed Treatment Short-course (DOTS).[167] All HIV intervention studies were from Africa and focused on offering free Antiretroviral Therapy (ART) care which included testing, counselling, and therapy.[79,148,151] Two HIV studies were also clinically based and focused on confirmed IDP HIV cases, while one was a community-based mass screening for only women of reproductive age.[79]

Mental health intervention studies were mostly multi-focused, targeting several health conditions.[146,147,150,153,154] For example, one study combined mental health and MCH,[147] and another combined essential drugs and group therapy.[146] Similar interventions and methodological combinations were utilised within the various mental health studies. Other techniques implemented included Group Counselling (GC) and Cognitive Behavioural Therapy (CBT). Medication use for mental health treatment was uncommon and reported in only the study by Humayun et al.[146] Generally, the mental health interventions had more variety of research tools compared to the other PHC components. This was shown by the different documents used to design and collect data. However, most of these research tools were uniquely adapted for the specific study settings, and not always replicable.

Identified health education[144,161] and essential drug[79,148,151] interventions were all integrated within other intervention studies. For example, health education

in FP program[161] and essential drugs in mental health[146]. Implementation approaches and outcomes for these components were, however not clearly reported, and only the study by Adam et al. presented evidence of the home-based FP counselling offered.[161] Therefore, both components were not assessed in this review.

2.3.4 Study sample population selection

Population size in the included studies ranged from 713 to 180,000 IDPs[52,155] and spanned across up to 6,900 households,[53] 129 camps[157] or 17 clinics,[148] depending on the setting. The surveillance study had the highest sample range of 13 to 835 households,[157] while treatment studies had samples of about 200 cases usually representing less than 10% of cases of interest.[143,147,148,150,151,153,154]

Average number of sites included in each study was between two and four, however interventions not focused on individual IDPs but the population level had more sites, for example, the surveillance intervention sampled 54 camps from 129 qualifying camps.[157] Most studies did not report the number of people in need before the study sample selection, so it was difficult to determine true intervention coverage.

Comparison groups were used in 12 studies.[51,79,154,159,143,145–147,149–151,153] These were mostly treatment and MCH interventions, including water treatments. Seven studies compared either IDPs in different camps or IDPs in the same camp[51,143,147,150,153,154,159] while five studies compared IDPs to non-IDPs.[79,145,146,149,151]

Different methods were used for sampling, data collection, and follow-up. Community-based survey methods with clustered and convenience sampling at household levels were the most common cross-sectional study approach. Survey data collection tools were usually adapted questionnaires translated orally when engaging directly with the participants. Most surveys were done at one point in time,[30,145,151,152,158,162] but some had up to 3-stages of data collection from the same or different sample populations.[52,78,79,144,161,163] Use of IDP self-reported information was common; but administrative, clinical and observational data were also used in 11 studies.[30,52,165,78,143,145,148,152,160,162,164] Additionally, a few studies collected test samples, such as water and blood, to verify outcomes using standard testing and procedures.[53,143,149,158,159]

Table 2.3 – Summary table of intervention study approach

Author Details	Intervention	Intervention Approach	Study Sites and Population	Methods	Study Target population
Adam 2016[161]	Reproductive Health	Emergency reproductive health program **Guideline used:** MISP for sexual and reproductive health in disasters	3 IDP camps women of childbearing age. Total 17,796	Community-based cluster survey Questionnaire adapted from the "Reproductive Health Assessment Toolkit for Conflict-Affected Women"	Women of childbearing age 15-49 years (640 women) **Comparison:** None
Bohler et al. 2005[149]	Tuberculosis Programme	Sudan National Tuberculosis Programme **Guideline used:** WHO Directly Observed Treatment, Short Course (DOTS) strategy	9 TBMUs: IDP camps (5), neighbouring communities (4)	Retrospective TB register analysis Questionnaires for health service information Semi-structured interviews for background information and treatment policies.	All sputum smear-positive and retreatment tuberculosis patients 254 IDPs **Comparison:** 127 Non-IDPs
Bolton et al. 2007[150]	Mental health	Interpersonal psychotherapy (ITP) groups **Guideline used:** ITP time-limited intervention developed in the United States for ambulatory, nonpsychotic unipolar depression. Adapted for adolescents with depression.	2 IDP camps >20,000 IDPs per camp	Local psychosocial screening tool ***Acholi Psychosocial Assessment Instrument (APAI)*** **Interventions:** 16 weekly group meetings 2 intervention groups and 1 control	14-17 years (314 adolescents) **Comparison:** IDPs
Cunningham 2011[165]	Reproductive Health	Antenatal, post-rape care, childbirth care, and gynaecology services **Approach:** Central fixed clinic with outreach via mobile clinic strategy	1 clinic	Multiple study methods (documents, interviews, and observations)	Displaced women and residents **Comparison:** None
Doocy et al. 2006[51]	Water treatment	Point-of-use water treatment **Approach:** Use of flocculant–disinfectant technology for home water treatment	2 sites 4,014 households; 22,800 IDPs	Weekly diarrhoea monitoring visits **Intervention:** Flocculant–disinfectant weekly and water testing	Households with <5 children (2,215 participants in 400 households) **Comparison:** IDPs
Elsanousi et al. 2009[52]	Water treatment	Use of LifeStraw water filter housed in a tube carried around the neck.	El-Masarf camp 713 people	Convenience sampling. Initial survey, clinic-based surveillance and post-intervention survey **Case definition:** WHO Integrated Management of Childhood Illness	All true residents >2years old (647 eligible, 134 households) **Comparison:** None

Garang et al. 2009[151]	HIV treatment	Provision of free HIV and ART care	1 hospital 1800 patients on ART	Semi-structured questionnaire. Non-adherence defined levels below 95%.	Adults (18 years and above) receiving ART (58 IDPs) **Comparison:** 148 Non-IDPs
Goodrich et al. 2013[148]	HIV Care	USAID-Academic Model Providing Access to Healthcare (AMPATH) Partnership **Approach:** Providing HIV care in both urban and rural settings.	17 primary HIV clinics 59,437 HIV positive patients (23,437 on ART)	Medical record system for patient-level data 5-component multifaceted disaster response plan developed Collected patient encounter, dispensed medication, and post-crisis clinic impact information Emergency hotlines answered by a clinical officer or nurse.	**Comparison:** None
Hamze et al. 2016[143]	Malaria	Mass drug administration (MDA) and mass screening and treatment (MSAT). **Approach**: Rapid Diagnostic Test (RDT) for screening and artemisinin-based combination therapy (ACT) for treatment	1 IDP camp 45,000–50,000 temporary residents	Prospective community-based survey Convenience sampling from health clinics Enrolled children with uncomplicated malaria (cases) and with non-malarial febrile illness (NFMI) as control	100 children febrile patients <5 years **Comparison:** IDP camp children with NFMI
Huhn et al. 2006[30]	Yellow fever vaccination	Mass yellow fever immunisation	6 IDP camps 87,000 persons	Cluster survey. Review of vaccination administrative coverage data and vaccination card	260 shelters sampled **Comparison:** None
Humayun et al. 2016[146]	Mental health	Mental health and psychosocial support (MHPSS) **Approach**: Psychosocial support and specialist care for child, treated mental disorders, medication and training for staff.	One region	Active advertisement, notifications to health facilities and small media conference to raise awareness. Holistic (bio-psycho-social approach) and Joint consultations, community follow-up and supervision **Treatments:** Existing ***WHO guidelines***	785 assessed (IDP and residents) **Comparison:** Non-IDPs
Jayatissa et al. 2012[78]	Food distribution	Nutrition Rehabilitation Program **Approach:** Staff capacity-building, Therapeutic food, Supplementary food, Blanket feeding, and other routine programs	60 IDP camps (public places such as schools, churches, temples, etc.)	6 phase-program integrated into the routine healthcare system Children categorized into SAM and MAM groups. **Measurements:** ***WHO procedure*** and ***UNICEF UNISCALES***	Children <5 years **Comparison:** None
Kim et al. 2009[79]	HIV treatment	Part of larger reproductive health assessment for adult females **Approach:** HIV and syphilis testing and HIV counselling and testing services	1 IDP camp and 2 surrounding communities 1,226 IDPs; 33,880 non-IDPs	2-stage random sample household survey. Referral vouchers for free voluntary counselling and HIV testing	Women aged 15-49 years. (IDP= 245 women selected) **Comparison:** 1,063 Non-IDP women
Kolaczinski et al. 2006[152]	Malaria treatment and management	Home-based management of fever (HBMF) **Approach**: Ensure effective	8 IDP camps	Sampled children given HOMAPAK® 3-7 days prior Radio broadcast to inform the camp leader, health staff and Community Drug Distributors (CDDs)	243 caretakers of children <5 years **Comparison:** None

		communication and treatment using pre-packaged combination of sulfadoxine-pyrimethamine and chloroquine		Screening of CDD register, conducting interviews and inspecting retained pack for remaining tablets.	
Lee et al. 2009[155]	Human resources for health (Malaria control)	Villager health worker partnerships malaria control programme **Approach:** Vector control using LLITNs, early diagnosis and treatment using ACT, and malaria education.	1 region 180,000 IDPs; 110,000 villagers	Report format study design CHW received training returned and trained villagers (VHW) to perform a comprehensive set of interventions programme.	IDP-VHW and General population **Comparison:** None
Morris et al. 2012[147]	MCH Feeding Mental Health	Community-based feeding program **Approach:** Psychosocial intervention (psychoeducation and emergency feeding) for mother and baby	5 feeding centres 103,018 persons	Training materials adapted from "***Learning through Play program***" Group sessions co-facilitated by psychosocial facilitator and nutrition support worker Used 3 test assessment tools	IDP Mothers-children pair (intervention: 3 centres, 132 mothers) **Comparison:** IDP (camps)
Mullany et al. 2010[163]	Maternal healthcare	Mobile Obstetric Medics [MOM] Project **Approach:** 3-tiered community-based maternal health workers collaborative network	12 sites. 4 states 61,114 individuals; 12,223 women of reproductive age	2-stage convenient cluster-sampling surveys MHWs selected directly from the community TBAs actively attended births were community recognised	Ever-married women of reproductive age (15–45 y) - Intended sample: 2,800 women **Comparison:** None
Nakimuli-Mpungu et al. 2013[153]	Mental health	Provision of routine psychological treatments to individuals initiating care in the trauma clinic included group counselling	4 district trauma clinics	Quasi-experiment, 3 point assessments conducted Psychiatric interview based on ***DSM-IV criteria*** Depression symptoms assessed using self-reporting questionnaire (***SRQ-20***); Post-traumatic stress symptoms assessed using locally adapted ***Harvard Trauma Questionnaire***	631 adults with a history of war traumatic experiences - (GC = 69; Non-GC =544) **Comparison:** IDP (camps) same sampled group (Non-GC)
Peprah et al. 2016[160]	Cholera vaccination	Oral cholera vaccination (OCV) campaigns, included health education	2 sites 27,000 IDPs	Purposively sampling based on vaccination status Semi-structured interviews completed within 4 months after the campaign. OCVs given to all >1 year old, excluding pregnant women. Paper cards documenting vaccination date and dose provided	49 IDPs adults **Comparison:** None
Pinto et al. 2005[157]	Surveillance	Early Warning System (EWS) **Used:** Reorganised national communicable disease surveillance system	129 camps	Working group set up to develop a protocol 12 of 22 health events selected for EWS **Reporting units:** Health centres in camps or areas with IDPs Data transmitted using satellite e-mail systems.	Camps with NGO presence (54 camps; 924,281 people) **Comparison:** None

Richards et al. 2009[144]	Malaria control	Integrated malaria control **Approach:** Distribution of long-lasting insecticide-treated nets (LLITNs), educational messages, early diagnosis, and treatment with mefloquine and artesunate.	7 villages 3,457 persons (746 households)	Universal screening conducted at 6-month intervals Suspected malaria case management followed ***Burma Border Guidelines*** Confirmed cases treated with a 3-day medication course LLITNs distributed for free to each household. Focus groups of health workers developed educational malaria messages. Community sensitization sessions and Knowledge, attitudes and practices (KAP) survey conducted	All IDPs **Comparison:** None
Sami et al. 2017[162]	Newborn health services	Facility-based newborn health services through primary helth units, primary healthcare centres (PHCCs) and hospitals	5 health facilities (1 hospital and 4 PHCCs) Mother-newborn pairs who sought services and birth attendants who provided delivery services	Health facility assessments, direct observation of midwife time-use, clinical observation of the labour and delivery period, and exit interviews with recently delivered mothers Checklist for medical commodities based on ***Newborn Health in Humanitarian Settings Field Guide.*** Clinical observations based on the ***Maternal and Child Health Integrated Program (MCHIP) Quality of Care Surveys***.	357 mothers recruited **Comparison:** None
Sonderegger et al. 2011[154]	Mental health	EMPOWER programme **Approach:** Culturally sensitive and cognitive behaviour therapy (CBT)-based intervention teaching, emotional resiliency and promoting forgiveness	2 IDP camps (1 intervention, 1 control)	Convenience sample, selected for close proximity to one another Local psychosocial screening tool ***Acholi Psychosocial Assessment Instrument (APAI)***. Administered at 3-time points Assessed depression, anxiety, socially unacceptable behaviours, and prosocial behaviours Programme promoted through radio announcements across to camps Group stratification according to age and gender	202 War-affected IDPs (90= treatment, 112=control) **Comparison:** IDP (camps) same populations
Spencer et al. 2004[158]	Malaria prevention	Mass distribution of ITNs	22 camps 62,712 people (25,552 nets,16,687 houses)	Community-based population survey using 3-stage cluster sampling. Nets provided free of charge Publicity education campaign in schools and camps, training session for the camp, and drama performance Finger-prick blood sample taken for haemoglobin measurement and examination for malaria parasites	1,245 IDPs (835 households) **Comparison:** None
Steele et al. 2008[159]	Water treatment	Disinfection of jerry cans using high strength sodium hypochlorite (NaOCl)	1 IDP camp 4,171 IDPs	Sample from jerry can for microbiological testing Two methods of cleaning were used.	13 households

		generated using an experimental AquaChlor Solar unit.		Jerry cans were tested for thermo-tolerant coliform bacteria, assumed faecal.	**Comparison:** IDP (camps) Same population/using different methods
Walden et al. 2005[53]	Water treatment	Mass disinfection of all water containers	1 IDP camp 6,900 households, 25 water sources	Population random sampling (5%) and questionnaires Baseline data collected 2 months prior to intervention. Weekly random sample of the storage water. Water source tested every 4 weeks using ***Oxfam Delagua Water Testing Kit*** and ***Sphere/WHO maximum advisory level (MAL) standards*** 2 people monitor water points for container disinfection Chlorination was conducted as per ***WHO's Guidelines*** Health education information broadcasted in local languages	328 households (5% population) 19 water sources **Comparison:** None
Wayte et al. 2008[164]	Sexual and Reproductive Health	Comprehensive Reproductive Health Strategy with key focus on Safe Motherhood. **Approach Study:** Coordination and priority setting, Antenatal care, Maternity waiting camp, Family planning, Gender-based violence, Adolescent health	Clinics	Mixed methods (secondary data review, quantitative and qualitative) In-depth interviews, informal discussion, observation, document review and analysis of service statistics Multi-institutional and multi-disciplinary team	General IDP **Comparison:** None
Zhou et al. 2016[145]	Malaria control	Malaria and vector surveillance **Approach**: Clinical malaria surveillance, screening, diagnosis, and treatment. Free ITNs and insecticide spray	7 hospitals/ clinics (3 IDP camps; 4 local villages) 11,000 IDPs; 1,200 local villagers	Clinical malaria cases from hospitals Treatment followed ***WHO guidelines*** Passive case surveillance conducted prospectively Clinical information from patients case report forms Malaria vector population dynamics monitored using ***CDC light traps*** twice a month Collect use of malaria preventive measures and information on aid agencies and their activities	400 households surveyed 300 IDP households (1,629 individuals) 100 local village households (519 individuals) **Comparison:** Non-IDPs 100 in local village households (519 individuals)

2.3.5 Intervention outcome, effectiveness and implications

Reported outcomes mostly showed positive changes and improvement after implementation of the interventions. The results were also grouped under four areas: disease prevention, food and nutrition; sexual, reproductive, maternal and child health; and treatment and essential drugs. Although malaria interventions included both preventive and treatment measures, to avoid duplication, it was presented only within the treatment section.

2.3.5.1 Disease prevention-related interventions

Intervention studies described in disease prevention category were those related to water, sanitation, vaccination, and surveillance.

Water treatment interventions mostly aimed to reduce diarrhoea incidence by minimising contamination. The technique used was disinfection of either point-of-use[51] or water storage[52,53,159], and both approaches were reported as being effective. For instance, one study observed a three-fold reduction in diarrhoea incidence adjusted relative risk (ARR) (ARR= 3.0, CI: 2.7–3.3) and four-fold decrease in prevalence (ARR=4.4, CI: 4.0–4.8) when compared with the control group.[51]

Steele et al. observed that water contamination did not come from water sources but from storage vessels.[159] The study by Doocy et al. also supported this when no difference was observed in water recontamination between comparator groups (water treatment vs no treatment) after the provision of improved storage vessels.[51] Generally, treatment of water storage lost strength over time, so required occasional retreatment.[53,159] Hence, although storage treatments showed immediate results, continuous disinfection was considered intensive and expensive.[52,53] This implied that interventions aimed

at the disinfection of water sources might be more efficient.[159] Intervention compliance rates were very high, especially when the services were offered free-of-charge.[52] Overall, water treatment interventions showed a reduction in diarrhoea incidence by about 90% and prevalence reduction by over 80%.[51–53]

The two vaccination studies focused on different diseases and research aims.[30,160] One on yellow fever (YF) vaccination administration and effectiveness,[30] and the other on cholera and vaccination perception.[160] Both studies reported vaccination coverage achievements above the WHO recommendations of 90%. Data used were however based on self-reports, and most IDPs had no proof or vaccination cards to use as evidence.[30] High coverage for YF was linked to high awareness of the disease severity.[160] Both studies showed slight reductions in vaccination uptake proportions compared to those originally pre-informed. This showed indications of weak vaccination communication. Factors reported to contribute to vaccine refusal were the assumed side effects, political influences and the fear that vaccines would be used as poisons to kill them.[160] Consequently, some IDPs trusted non-governmental organisations (NGOs) to provide them with vaccination rather than the national government.[160]

Outputs from the EWS surveillance[157] showed that during the study period, in 76% of the sample camps (41 of 54 camps), the most common diseases reported were acute respiratory infections (18.7%), malaria (15%), bloody diarrhoea (8.4%) and severe acute malnutrition (1%). Also, deaths were mainly due to severe malnutrition, measles, and bloody diarrhoea. One major benefit from the EWS, as noted in the study, was the increased ability to quickly detect outbreaks of uncommon diseases such as hepatitis E.

2.3.5.2 Food and nutrition intervention

The food and nutrition study,[78] showed reduced levels of all forms of acute malnutrition [Global-, Severe- and Moderate- Acute Malnutrition (GAM, SAM, MAM)]. Reduction of each category was between 39% and 80%. The study also monitored for anaemia (another potential indication of nutritional deficiency) and observed that although there was a reduction in malnutrition, anaemia levels remained higher than the national prevalence at 34% compared to 25%. This difference highlights the need for further research to investigate this finding.

2.3.5.3 Sexual, reproductive, maternal and child health interventions

Family planning (FP) interventions all showed increased service uptake. For example, the study on association between home-based counselling and use of FP reported that women receiving home-based FP counselling increased from 7.3% to 59.8% ($p<0.001$)and those aware of modern FP methods increased by over 20% (aOR = 2.8, CI: 2.0–4.1, $p<0.001$).[161] Wayte et al. however reported fewer women received FP and antenatal care (ANC) in camps, yet ANC uptake was higher compared to other MCH services.[164] Also, obstetric care provided in the study by Mullany et al. showed significant uptake, especially among women with recent pregnancies.[163] Poor uptake of some services could be explained in the study implemented in a non-camp setting which showed IDP women expressed poor privacy satisfaction (63%) and inadequate provision of required needs.[165] STIs and HIV/AIDS were not a major focus in the SRH interventions.[161–165] Generally, most SRH interventions lasted for long durations (up to 3 years)[161,163] compared to other intervention types. Reasons given for shorter SRH intervention periods included poor sustainability and high-cost implications.[164]

MCH intervention improvements were attributed mainly to the increased availability of healthcare resources, i.e. health workers and essential supplies, especially the provision of FP commodities for pregnancy risk reduction.[162,163] Mullany et al. reported skilled birth attendance trained in emergency obstetric care increased from 5.1% to 48.7% (prevalence rate ratio (PRR)=9.55, CI: 7.21–12.64) which contributed to increase in antenatal and postnatal care (PNC) (PRR =1.83, CI:1.64–2.04) and (PRR=2.07, CI: 1.81–2.37), respectively.[163] The study on newborn care which described facility-level services, reported lack of newborn services and wide disparities in the care provided at primary levels compared to hospitals.[162] Difference in healthcare quality was evident in the higher number of recommended essential drugs available at hospitals (20 of 37) compared to primary care facilities (9 of 25).[162] The observed service differences also influenced health outcomes. For example, compared to the hospitals, the relative risk of infection 1.28 (CI: 1.11-1.47), indicated a 28% higher risk of getting an infection at the primary care. Both studies, however, showed that mothers whose births were conducted by skilled attendants were more likely to take up PNC.[162,163] Observations also showed poor knowledge of newborn danger signs among new mothers and that midwives spent more time on non-patient activities due to staff shortage, conversely showing the effect of staffing limitation.[162] However, the study showed, although deliveries taken by skilled attendants relative to TBAs were more likely to receive PNC (RR=1.59, CI: 1.09-2. 32), other practices were not statistically different.[162] Largely, the availability of MCH services at clinics created positive awareness among mothers and increased usage of health facilities.

2.3.5.4 Treatment and essential drugs interventions

The TB study compared treatment uptake between IDPs and non-IDPs.[149] Observed treatment coverage of 65% and 54.2% cure for new and retreatment of IDP cases respectively, and 43.5% and 64.3% for non-IDPs were unsatisfactory when compared to the WHO TB treatment target of 85%.[168] The study reported IDPs TB management units (TBMUs) received more intervention resources compared to those of non-IDPs. This included more frequent drug supply, health education, and cheaper health services. Positive outcomes among IDPs compared to non-IDPs, for instance, the treatment for new cases (65% vs 43.5%), were attributed to those extra benefits. However, the rate of cure for retreatment cases between IDPs and non-IDPs were reversed (54.2% vs 64.3%). Hence, TB treatment completion rates were less among IDP new cases but higher for IDP retreatment cases. The conflicting observations were linked to the fact that IDP migration caused a break in the treatment period and resulted in more IDPs needing retreatment.

All HIV studies focused on HIV management and adherence.[79,148,151] Adherence to treatment was generally high, with one study reporting a mean adherence of 99.6% and no significant difference when compared to non-IDPs (p= 0.86).[151] Key factors that influenced non-adherence among IDPs were being at the first stages of treatment and condemning attitudes of health staff both with OR=22.2 (CI:1.5–333.3).[151] The study by Kim et al. showed significant association between recent STI symptoms and conflict-related sexual violence among IDP women compared to non-IDPs (aOR= 3.9 and 4.2; p-value <0.01 and =0.05, respectively).[79] The study by Goodrich et al. which documented the experiences of offering HIV care in active conflict

settings, concluded that HIV care is possible to implement if planned effectively and included rapid case tracking, availability of resources, staff support and promotion of patient and community networks.[148]

Studies on malaria prevention using insecticide-treated nets (ITNs) or long-lasting insecticide-treated nets (LLITNs) showed high uptake among the IDPs.[144,158] The study by Spencer et al. reported ITN use of up to 75.6% but most nets were often damaged.[158] Despite that, net usage was considered a protective factor, as shown by the higher malaria prevalence among non-ITN users, as shown in the difference in malarial parasitaemia prevalence between ITN users compared to non-users (9.2% vs 3.8%, RR= 0.63, 95% CI 0.46-0.87).[158] The study also monitored haemoglobin concentration and but no difference between users and non-users was observed; however, fever was revealed to be highest among children <5 years.[158] In another study on community-based integrated malaria control programme which offered malaria education, use of LLITNs was also reported to increase from 0% to 89%.[144]

For malaria-infected individuals, active case finding was reported as the best approach to identifying cases for treatment.[143] Two other studies carried out comparisons for active case finding of malaria, one with non-IDPs[145] and the other between two IDP groups.[143] The study comparing with non-IDPs discovered more active intervention support had been provided to IDPs compared to non-IDPs as shown in the proportion of bed net use between IDPs and non-IDPs of 60.9% vs 0.4%.[145] Nearly all nets used by the non-IDPs were without insecticide treatment. Improved access to ITNs among IDPs was correlated with the observed lower malaria incidence in recently established IDP camps compared to surrounding villages. Richards et al. found a similar

result with the mean number of IDPs owning a net being higher compared to resident villagers (3.1 to 2.7).[144] Active case finding study comparison between IDP groups showed that household contacts reporting mild symptoms had a higher odds of malaria than asymptomatic individuals (OR=14.0, CI:4.2–48, p≤0.001 and OR=18, CI: 5.9–54, p≤0.001, respectively).[143] However, in these households where one person was infected with malaria, other members were not more likely to be infected.[143] This implied household malaria screening interventions were not effective, and malaria was not contagious. Although the other study showed malaria annual malaria incidence was still higher among IDPs compared to non-IDPs in the study by Zhou et al. at 38.8 and 127.0 cases/1000 person-year respectively (ARR=3.9, CI:1.9, 15.9, p<0.0001).[145]

High malaria prevalence, since not contagious, was attributed to the high vector population observed in IDP camps compared to non-IDP areas.[145] In addition, seasonal variation of malaria was noted to influence prevalence rates and lead to outbreaks, among both IDPs and non-IDPs.[145] Results from the studies suggested that the most cost-effective malaria control strategy was the screening of symptomatic patients (symptom-based screening). But the most comprehensive approaches advised were mass drug administration (MDA), and mass screening and treatment (MSAT).[143] Regardless of intervention methods, the studies showed that for any strategy to be effective, it was fundamental to involve multiple groups. This was demonstrated in the studies which included various parties in malaria management including caretakers, IDPs, community drug distributors (CDDs) and community/villages health workers (CHW/VHW).[143,152,155] Malaria treatment side effects were observed in some cases,[152] but proper education was identified to be effective

in encouraging usage and adherence, as evident in the prevalence reduction after in the study by Spencer et al.[158]

The most common mental health conditions studied were anxiety and depression, and the main intervention technique was group activity therapy. One study which compared outcomes with non-IDPs reported most IDP mental health symptoms existed before displacement (60%), with only 18.7% occurring after displacement.[146] Studies on depression, anxiety, and PTSD reported reductions and an overall improvement in mental function among intervention groups compared to control groups.[147,150,153,154] Some improvements were not observable at the early stages of the interventions, for example within the first three months. However, even minimal engagement within the intervention proved beneficial compared to no intervention at all.[150,153,154] Higher depression symptom scores were observed among IDPs living in camps (OR=2.40, CI: 1.10-5.23), implying IDP camp residents were about two times more likely to experience depression.[153] The group therapy which incorporated mental health and MCH care, observed that reduction of worry and sadness among mothers increased their involvement in childcare and feeding, and this helped reduce child malnourishment, all with a p-value of <0.001.[147] Only the study in Pakistan reported a combined mental health intervention which used both pharmacological and psychological treatments, and this combination was offered to only about 60% of cases.[146] Generally, education on anxiety and coping skills of displaced people were effective in relieving symptoms of mental health.

Table 2.4 – Summary table of included study outcomes

Author Details	Intervention	Study Results	Implications/Association
Adam 2016[161]	Reproductive health	100% response rate in both surveys. Women receiving home-based FP counselling increased from 7.3% (47/640) to 59.8% (383/640), (p<0.001). Current modern FP use increased from 10.9% to 21.6% (aOR = 2.8). Awareness of modern FP increased from 60.2% to 85.0% (aOR=5.4)	Home counselling associated with awareness and use of any modern FP methods Availability of FP services at clinics created positive awareness of modern FP methods and increase usage.
Bohler et al. 2005[149]	Tuberculosis	Achieved sample: 449 TB patients (295 IDPs; 154 Settled). **Treatment outcomes:** Cure; completed; died; failed (defaulted, transferred)]: - New cases - IDPs [65%; 9.3%; 4.5%; (15%, 5.7%)], Settled [43.5%; 21%; 3.6%; (21%, 9.4%)]. - Retreatment cases - IDPs [54.2%; 12.5%; 2.1%; (29.2%, 2.1%)], Settled [64.3%; 7.1%; 0%; (28.6%,0%)]. **Key Health service factors:** Settled TBMUs received drug supplies every 90 days while camp TBMUs receive every 1-2 weeks TB awareness training offered to patients in all TBMUs except one camp and one settled clinic Health education and separate waiting area for TB patients in all camps but only one settled clinic Cheaper general health services in camps	IDPs compared favourably than settled population. Cure rates of 63% and 43.5% respectively among IDP and settled populations not satisfactory compared to the WHO target of 85%.
Bolton et al. 2007[150]	Mental health	Enrolled: 290 adolescent All 3 study groups showed decline in mean depression symptom scores and improvement in function scores: **Intention to treat** --- IPT-G (17.0%), CP (18.2%), control (16.0%), **Completers** --- IPT-G (16.5%), CP (19.2%), control (17.0%),	Number of IPT-G sessions attended associated with greater symptom reduction, but not between CP sessions and symptom change. Neither IPT-G nor CP was effective in improving anxiety, conduct problems, or functioning
Cunningham 2011[165]	Sexual and Reproductive health	Antenatal care coverage was 95%, uptake of delivery 3%, family planning 2%, and postnatal care 17%. Quality of sexually transmitted infection case management 58%. Post-rape care was timely and appropriate. 98% of women were satisfied with overall care. Privacy unsatisfactory for 63% women and 25% had health needs that went unaddressed during the visit.	Reproductive health status precarious, with high rates of obstetric complications in mothers and newborns. Strategy and scope of services were appropriate. ANC was well-utilized, but uptake of other services, especially emergency obstetric care, was low.
Doocy et al. 2006[51]	Water treatment	Reduced diarrhoea incidence by 90%, ARR=3.0 (CI:2.7–3.3) and prevalence by 83%, ARR=4.4 (CI:4.0–4.8) compared with control. No significant difference in the rate of contamination between the two sites. Intervention group, residual chlorine levels met or exceeded Sphere standards from 67.7% to 85%	Decline in diarrhoea incidence attributed to the presumed reduction in contamination of water during storage and transport as a result of improved water storage

Elsanousi et al. 2009[52]	Water treatment	Post intervention: 603 participants Compliance rates: 531 people (86.5%) "always used"; 80 (9.8%) "occasionally used", 23 (3.7%) "never used" Diarrhoea report reduced from 99 (15.3%, CI:12.6–18.3%) to 14 (2.3% CI:1.3–3.9%) (p <0.0001). Clinical presentation of diarrhoea new cases reduced from 58 to 6	LifeStraw can lead to a reduction in diarrhoeal disease, at least in the short term. High compliance in use of the device when given out for free
Garang et al. 2009[151]	HIV treatment	Overall mean 4-day adherence was 99.5%. No significant difference in adherence between IDPs and non-IDPs (99.6% and 99.5%, p= 0.86). Being on a first-line regimen of ART (OR=22.22, CI:.48–333.33) and feeling that staff at the health centre were condemning (OR=22.22, CI:53–333.33) were independently associated with nonadherence.	Adherence to ART high at average adherence rates above 99%. No significant difference observed among patients living in and those outside the IDP camps.
Goodrich et al. 2013[148]	HIV Care	All clinics opened within 5 days of schedule, only 5 clinics (25%) had full number of expected non-clinician staff Antiretrovirals availability uninterrupted at all clinics 23,949 patient visit in January 2008 (23,259 previously scheduled) 1,420 HIV patients in IDP camps seen (1,290 AMPATH patients, and 637 ART) Basic provisions distributed to over 1,290 AMPATH patients and their dependents. Outreach services to locate missing AMPATH patients mobilized Psychosocial support offered to 300 staff members and 632 patients in IDP camps.	**Lesson learnt:** Rapid organisational response is critical, Clinic autonomy and self-sufficiency is indispensable. Patient knowledge of their HIV status and treatment regimen necessary. Promoting, Patient and community networks are essential, Ensure staff security and access to basic needs. Need the ability to rapidly identify and track patients requiring ART.
Hamze et al. 2016[143]	Malaria	Detected 29 cases of malaria through active case-finding. Household contacts of children with uncomplicated malaria no more likely to be positive than controls (OR=0.89, CI:0.33–2.4, p = 1.0). Household contacts reporting mild symptoms had a higher odds of malaria than asymptomatic individuals (OR=14 (CI:4.2–48), p ≤ 0.001 and 18 (CI:5.9–54), p ≤ 0.001, respectively). Most cost-effective strategy is screening symptomatic patients within the camp, whereas MDA and MSAT were the most comprehensive strategies	Screening household contacts of malaria cases not an efficient case-finding strategy. Symptom-based screening may be a simpler and cost-effective method to identify individuals.
Huhn et al. 2006[30]	Yellow fever vaccination	69,536 persons overall estimated to be living in IDP camps 237 study respondents (1 per shelter) 230 (97.6%, CI:95.5–99.6) informed of vaccination campaign. 215 (91.9%, CI:88.4–95.4) vaccinated during campaign 196 (83.5%, CI:78.6–88.5) had vaccination cards. Coverage rates exceeded 90% by self-report and 80% by vaccination card evidence.	High coverage rates indicated campaign was effective. Near-universal knowledge and broad acceptance of campaign among IDPs, highlighting high degree of YF disease awareness. Imprecise population estimates in the early planning stages may impact vaccine planning
Humayun et al. 2016[146]	Mental health	680 index cases (65% IDPs, 27% residents). 60% IDPs reported onset of symptoms before displacement,18.7% following displacement, 21.3% unrecorded. 75% drug prescription were anti-depressant,10% anti-psychotics, 8% anti-convulsant 60% offered both pharmacological and psychological treatments.	Demonstrates an effective model for emergency mental health response via collaboration.

Jayatissa et al. 2012[78]	Food distribution	Prevalence of GAM among <5 children dropped 47% (18% to 9.6%), SAM prevalence dropped 80% (3.5% to 0.7%) MAM dropped 39% (14.5% to 8.9%). Anemia prevalence remained high at 34% compared to the national prevalence of 25%.	Integration of program into the routine health delivery, protocol simplicity, ease of training of health staff and development of operational plan contributed to the success of the program
Kim et al. 2009[79]	HIV treatment	HIV prevalence higher among women in the IDP population compared to the river population at 7.6% (CI:4.1–11.0) to 3.1% (CI:2.1–4.1). STI symptoms in past 12 months and history of sexual violence during the conflict associated with HIV infection for river and IDP populations, (aOR=3.9; CI:1.6–9.9) and (aOR=4.2; CI:1.03–16.9; p=0.05); respectively. Dose-response relationship was not observed in the bivariate analysis (P>0.2).	HIV prevalence among non-IDP participants similar to national, but higher among females. Women with symptoms of STI vulnerable irrespective of HIV status History of sexual violence during the conflict among female IDP significantly associated with HIV infection.
Kolaczinski et al. 2006[152]	Malaria treatment and management	241 caretakers interviewed. 95.0% (CI:93.3–98.4) children received correct dose for their age and 52.3% caretakers retained blister pack. Overall adherence was 96.3% (CI: 93.9–98.7).	Community Drug Distributors (CDDs) play an important role in malaria control in IDP camps but most were not regularly supervised or motivated Treatment combination caused few side effects in children.
Lee et al. 2009[155]	Human resources for health (Malaria control)	3-fold increase in health worker density from 22 CHW per 10,000 persons in 2003 (CHW in pilot areas only) and inclusion of VHW to 53 per 10,000s (pilot areas) and 37 per 10,000s (newer areas) in 2008. Integrated malaria control interventions offered increased from 3000 IDPs in 2003 to nearly 40,000 in 2008 across 51 villages. Rapid expansion possible by strategic training and use of VHWs.	IDPs are capable of delivering essential malaria control interventions in areas of active conflict. Health workers in the area have the capacity to train community members to implement interventions. VHWs reduced CHW workload, improved coverage and minimised over-investment of financial and human resources
Morris et al. 2012[147]	MCH Feeding Mental health	Intervention group (n=70) showed greater involvement with their babies (p<0.001), more availability of play materials (p<0.001), emotional responsibility (p<0.001), and less sadness and worry (p=0.003) in comparison to the contrast group (n=77).	Brief group intervention improved maternal involvement, increased the availability of play materials, and decreased sadness and worry in displaced mothers of malnourished children. Intervention acceptable to mothers and easily taught. Increase infant stimulation have maternal mood beneficial effect
Mullany et al. 2010[163]	Maternal healthcare	Achieved sample: 2,484 women Most recent pregnancy more likely to receive Antenatal care (71.8% versus 39.3%, PRR=1.83 [CI:1.64–2.04]) and interventions such as urine testing (42.4% versus 15.7%, PRR=2.69 [CI:2.69–3.54]), malaria screening (55.9% versus 21.9%, PRR=2.88 [CI:2.15–3.85]), and deworming (58.2% versus 4.1%, PRR=14.18 [CI:10.76–18.71]. Postnatal care visits within 7 days increased 33.7% to 69.8% (PRR=2.07 [CI: 1.81-2.37]). Use of modern methods to avoid pregnancy increased from 23.9% to 45.0% (PRR=1.88 [CI:1.63–2.17]), and unmet need for contraception was reduced from 61.7% to 40.5%, relative reduction of 35% (CI 28%–40%). Birth taken by trained emergency obstetric care staff increased from 5.1% to 48.7% (PRR=9.55 [CI:7.21–12.64]).	3-tiered network of providers led to an almost 10-fold increase in the proportion of women attended to at delivery by individuals trained to provide emergency obstetric care Expanded family planning supplies led to improvements in utilization and decrease in unmet need, thereby reducing women's exposure to the risks of pregnancy

Nakimuli-Mpungu et al. 2013[153]	Mental health	Compared to Non-GC participants GC participants had a faster reduction in depression scores at 6-month follow-up period [β=−1.84, CI:−3.38 to −0.30, p=0.019] and faster reduction in post-traumatic stress scores during the 3-month follow-up period [β=−2.14, CI:−4.21 to −0.10, p=0.042]. At 3-month follow up, GC participants who attended two or more sessions had a faster increase in function scores [β=3.51, CI (0.61–6.40), p=0.018] than participants who attended only one session. Higher depression symptom scores showed if residing in IDP camps [OR=2.40, CI:1.10–5.23].	GC for traumatized adults with mental disorders being treated with medication is feasible and potentially effective in relieving mental distress GC is a cost-effective approach for dealing with emotional problems among individuals living with MNS disorders.
Peprah et al. 2016[160]	Cholera vaccination	OVC reached 85–96% of the target population. Heightened fears of disease and political danger contributed to camp residents' perception of cholera as a serious illness and increased trust in the United Nations and NGOs providing the vaccine to IDPs. Reasons for partial and non-acceptance of the vaccination included lack of time, fear of side effects, distrust in national institutions in a context of fears of ethnic persecution, fear of taking the vaccine alongside other medication or with alcohol.	High level of acceptance of OCVs in this context can be attributed in part to perceptions of cholera as a severe disease Perceptions of cholera risk extended beyond the domain of health to incorporate contextual circumstances of the political crisis which led to displacement
Pinto et al. 2005[157]	Surveillance	Ten weeks after implementation 41 camps (76%) reported regularly under the EWS. Between 22 May and 30 July, 179,795 consultations were reported: acute respiratory infections (18.7%), malaria (15%), bloody diarrhoea (8.4%); severe acute malnutrition (1%) More than 1,000 cases of acute watery diarrhoea reported. Two outbreaks of Shigella dysenteriae were detected 868 deaths reported, the three main causes were severe malnutrition, measles, and bloody diarrhoea, accounting for 101(11.6%), 34(4%) and 26(3%) fatalities Increase in the number of cases of acute jaundice reported in one camp led to an outbreak of Hepatitis E	EWS is useful for detecting outbreaks and monitoring the number of consultations required to trigger actions, but not for estimating mortality. EWS allowed for standardisation of data collection, information dissemination and identification of intervention priorities
Richards et al. 2009[144]	Malaria control	P. falciparum prevalence declined from 8.4% (CI:8.3-8.6) to 1.1% (CI:1.1–1.2), p<0.001. Annual incidence declined 232 (CI:206–262) to 70 (CI:56-88) per cases/1000/year with IRR=0.30 (CI:0.24–0.39) Household members sleeping under an LLITN improved from 0% to 89% and malaria KAP improved in all areas. Mean number of IDPs per net owned was 3.1 (range 2.5–3.2), but 2.7 (village range 2.4–2.9)	Incidence in a conflict area in eastern Burma is higher than the incidence rates reported among Thais, foreign nationals or displaced Karen in western Thailand, and among Burmese refugees living in 9 Thai border camps
Sami et al. 2017[162]	Newborn health services	Facilities lacked recommended medical supplies for essential newborn care. 2 of 5 facilities had skilled midwives working during all operating hours and 6.2% of the time was spent on postnatal care. Selected components of thermal care (62.5%), infection prevention (74.8%), and feeding support (63.6%) were commonly practiced, but postnatal monitoring (27.7%) was less consistently observed Differences between primary care level to the hospital (thermal: RR=0.48,CI:0.40–0.58; infection: RR=1.28, CI:1.11–1.47; feeding: RR=0.49, CI=0.40–0.58; postnatal: RR=3.17, CI=2.01–5.00).	Service availability and readiness for newborn care was a challenge for healthcare organisations at the facility level. Midwives spent the majority of time on non-patient contact activities. New mothers had inadequate knowledge of newborn danger signs

		Availability of essential drugs at primary care level (9 of 25) and hospital (20 of 37) Deliveries by skilled attendants relative to TBAs more likely to receive postnatal monitoring (RR=1.59, CI:1.09–2. 32), but other practices were not statistically different. Mothers' knowledge of danger signs was poor, with fever as the highest reported (44.8%) followed by not feeding well (41.0%), difficulty breathing (28.9%), reduced activity (27.7%), feeling cold (18.0%) and convulsions (11.2%).	
Sonderegger et al. 2011[154]	Mental health	No significant differences in conditions between groups at pre-assessment, but significant differences found at post-assessment ($p<0.001$) and at 3-month follow-up ($p<0.001$). Participants in the treatment condition reported significantly lower scores on the depression-like syndromes and the anxiety-like syndrome (all 3 measure at post and follow-up had $p<0.001$); and more prosocial behaviours ($p<0.01$ and $p<0.001$ at post and follow-up), than participants in the control condition	Teaching displaced persons about the physiology of anxiety and teaching CBT coping skills can help them, and be effective in relieving symptoms of trauma and anxiety in the context of an active conflict zone CBT can be adapted to African populations generally and persons who have been internally displaced specifically
Spencer et al. 2004[158]	Malaria prevention	ITN was present in 75.6% (CI:72.7–78.5) of the households, but only 56.5% (CI:52.3–60.4) individuals slept under an ITN, and nets were often damaged. Prevalence of malarial parasitaemia was 11.2% (CI:9.4–13.0) significantly lower in ITN users compared to non-users (9.2% vs. 3.8%, RR=0.63, CI:0.46–0.87) ITNs with severe damage remained effective (RR for severely damaged net 0.58, CI:0.35–0.98). No significant difference in haemoglobin concentration between ITN users and non-users. Fever was higher in the <5years compared to the 5 and above age group (27.4% vs. 20.2%, P=0.002)	Pre-distribution educational campaign for net use was effective People sleeping under ITNs had a 37% lower risk of having malarial parasitaemia than people not using them
Steele et al. 2008[159]	Water treatment	Source consistently tested 0cfu/100ml and levels in jerry cans could not reduce to 0cfu/100ml microbiological contamination, indicating contamination in the jerry cans did not come from water sources. Cleaning using Method 1 led to more consistently lower coliform counts than Method 2 Method is capable of significantly reducing thermo-tolerant coliform numbers to below 5 cfu/100ml in most cases. Chlorine strength depletion after repetitive cleaning.	Drinking water remains a significant health risk, despite water sources being safe Process is an effective means of cleaning water vessels, but not of preventing recontamination Method does not substitute for good hygiene practices, which are essential for maintaining water quality in the household.
Walden et al. 2005[53]	Water treatment	Diarrhoea figures from the clinics showed a fall in cases following the cleaning campaign. 13,224 water containers were disinfected: 88% of the estimated number of containers in the camp. Random residual chlorine in 172 containers showed avearge amount of chlorine remaining in containers was 0.22 milligrams per litre	Disinfection programme had an impact on the prevalence of bloody and watery diarrhoea Jerry can disinfection was labour intensive but produced almost immediate results.

Wayte et al. 2008[164]	Sexual and Reproductive Health	**Coordination and priority setting:** Reproductive health response to the crisis focused on safety of pregnant women **Antenatal care:** Mobile ANC services provided to 29 of 56 camps ceased after two months to promote a sense of normality **Maternity waiting camp:** Established with 2 dozen tents on the grounds of the National Hospital to improve hospital-based births and emergency obstetric care access - 261 pregnant women transferred to the maternity waiting camp as at November 2006. - Camp accounted for about a quarter of births at the hospital in first few months, then declined. - **Family planning**: FP commodities were supplied through health centres, but few women accessed FP services in IDP camps. - Only 16 of 399 women seen for ANC during mobile clinics - **STIs and HIV/AIDS:** Not highlighted as part of the coordinated emergency response - **GBV**: Protection Working Group established a sub-group to monitor and address GBV in response to the crisis. From 1 June to 31 October 2006, there had been only 12 cases of domestic violence, child abuse, and sexual assault. Relatively little attention focused on men. Little involvement of the health sector in relation to GBV **Adolescent health**: No approach existed before the crisis. For emergency response decided to avoid short-term projects for undeveloped programmes.	Maternity waiting camp strategy did not provide a sustainable solution Condoms not extensively distributed by service providers or accepted by patients. Hence, complete absence of reported condom distribution during the crisis
Zhou et al. 2016[145]	Malaria control	Malaria confirmed in 1832 patients (14,462 IDPs amd 441 locals of which 85.4% P.vivax and 11.4% P.falciparum) Annual malaria incidence rates 38.8 and 127.0 cases/1000 person-year in IDP camps and local villages, respectively (ARR=3.9, CI:1.9– 5.9], P<0.0001) Seasonal malaria outbreaks observed both in the IDP camps and in the local villages. P.vivax proportion unchanged in local villages but increased about tenfold in IDP camps Anopheles malaria vector density tenfold higher in local villages compared to IDP camps (2.0:0.2 females/trap/night). No significant difference in the average number of larval breeding habitats but larval density in the IDP camps were significantly higher. Over 99 % of households in both communities owned bed nets (of which 60.9% LLITNs used in IDPs against 0.4% in local villagers). Nearly all residents of local villages owned regular nets without insecticide-impregnation. There were more active aid agencies and resource supply (insecticide spraying, clinics, and doctors/nurses) in the camps than in local villages.	Malaria in recently established IDP camps significantly lower than surrounding villages through effective control management Prompt establishment of healthcare clinics, resource mobilization, and pro-active malaria control activities could all be factors affecting the risk of malaria transmission in the camps.

2.3.6 Observed limitations, challenges and research gaps

Reported limitations and challenges were mostly study design and conflict-related. This included the inability of cross-sectional studies to show causality, insecurity of study locations and the lack of local administrative resources. In most cases, multiple factors impacted intervention program implementations.

2.3.6.1 Limitations and Challenges

A critical factor that influenced intervention pre-implementation phases was minimal access to background data required for planning and designing the programs;[30,148,149,157,158] and these limited intervention planning efficiency. Lack of accurate national, clinical and displacement data negatively impacted the ability to quantify the actual proportions of IDPs or adequately calculate the required sample sizes needed, especially for treatment interventions.[78,148]

The major cross-sectional study weakness of being unable to establish causal inferences made it difficult to attribute observed outcomes and effects to the intervention or risk factors.[79,144,161] Consequently, most studies did not report evidence of statistical tests conducted to validate the effectiveness of the studies. Furthermore, the uniqueness of the study groups (IDPs in different settings and stages) and the use of small and non-random samples implied IDPs selected in the studies might not be an absolutely accurate representations of the general IDP populations, therefore restricting study generalisability.[52,53,147,150,153,163]

Several similar limitations were reported across all the study types. Reporting and courtesy biases were common where information used was self-reported or based on long recall periods.[51,160] These often led to overestimation and other inaccuracies.[79,151] Rater bias, which is caused by inaccurate judgement

due to personal involvement, was observed in studies using the same staff or personnel for both intervention implementation and evaluation.[147,162] The study by Kim et al. on HIV, found that social desirability bias might have influenced responses to sensitive questions on sexual behaviour and GBV.[79] This was also linked to the Hawthorne effect observed in the study by Sami et al. where health workers likely changed their practice approach when aware they were being observed.[162]

Some studies reported a lack of skilled health professionals familiar with the local culture to be involved in the interventions.[78,150] Humanitarian agencies provided most skilled staff, but they were generally available for only limited periods.[146] Shortage of sufficient administrative resources and proper guidelines affected comprehensive follow-up.[53,154] Insecurity also affected staff functionality, and to avoid possible harm, fewer people worked in the field, and this contributed to fewer IDPs being reached.[144,154,158,163] These factors influenced study comprehensiveness, as well as depth and quality of the interventions.[148,150,153,162]

One study indicated, since the intervention duration was short, observed outcomes may not be true reflections if conducted over longer periods.[52] Time limitations were often related to insecurity which influenced accessibility to study sites; therefore most locations were selected based on ease of access and proximity.[51,52,146,147,151,157] Security restrictions also made data collection possible only at certain times,[158] and sometimes led to early intervention termination.[162,164] Hence, these issues affected both sample representativeness and study generalizability.

Other study limitations reported were low male participation[30,150,158] and studies with multiple elements not always disaggregating outcomes for each intervention component, especially in the mental health studies.[147,153,154] Some authors acknowledged these likely limited the specificity of the findings and overall program impact.[147,153,163]

External factors that influenced intervention implementations included national activities and policy, for example, relocation of IDPs by the government;[148,149] change in political circumstances and bottlenecks;[162] disagreement between stakeholders on intervention approach to adopt;[147] effects of weather and seasonality;[51,52,143,144] socio-cultural inhibitions like education and religion;[78,146,152,153] type of tools used to carry out the interventions;[52,145,150,159] physical infrastructure limitations;[51,145] communication access[157] and donor priorities.[147]

2.3.7 Recommendations from included studies

Most recommendations presented in the studies were responses to the limitations, challenges, research outcomes, and gaps identified. Cross-cutting themes from all the studies, as well as specific recommendations from the different interventions, are listed below.

2.3.7.1 General recommendations

- Increase evidence-based intervention documentation to inform future programs in conflict settings.[147,150,154,155,158,161,163]
- Cost-effective evidence-based intervention can prevent higher volumes of negative health outcomes.[159,162]
- More proactive care interventions are required as opposed to reactive care.[143]

- Surveys can be used as vital instruments for rapid evaluation, but closer monitoring is essential[30,157,164] and evaluations should be combined with frequent follow-up studies to measure long-term impact.[147]
- Implementation of properly targeted approaches would create more impact in short time periods.[78]
- Interventions should include affected populations during displacement and resettlement, i.e. re-entering into the community,[79,158] and this should also include non-IDPs.[78,145,163]
- Important to include advocacy especially at national level.[146]
- Long-term funding required for interventions such as HIV[79] and donors need to include factors related to human, logistic, and time demands in their research budgets.[147]
- Interventions should be within the context of the local population characteristics, culture, and preferences.[147]
- Need for wider impact assessments of implemented interventions using RCT studies and larger samples,[153] and IDP practice monitoring after the study periods.[52,53,144,158]

2.3.7.2 Intervention-related recommendations

- Need to draw attention to the adverse impacts of certain outcomes especially among vulnerable groups, for instance, the adverse impacts of malaria during pregnancy[164] and newborn healthcare.[162]
- Need to identify causal risk factors of diseases such as anaemia[78] and HIV[79] and the consequence of delayed diagnosis for critical conditions like TB.[149]

- More health education activities are required to enhance early diagnosis and uptake of interventions[149,152,153] such as for proper malaria prevention and treatment management,[152,158] mental health,[153] and GBV awareness.[145]
- More integrated interventions are advised especially for water treatment,[51,52] VPDs,[30] and STI treatments.[79]
- Need to clarify community roles in the management and treatment regimen of certain illnesses, for example, malaria.[147,152]
- Interventions for IDPs should be included in national programs like the EPI schedule and HIV treatment.[30,79]
- National emergency preparedness plans should be developed to ensure prompt responses.[146]
- Health systems in conflict regions need to be established and/or strengthened to improve health intervention stability[78,146,149,164] including active surveillance system.[157]
- Intervention communication is critical to get target populations' involvement and perceptions,[144,160,164] e.g. vaccination;[160] and where necessary getting buy-in from other interest groups, e.g. community and church leaders in SRH interventions.[164]
- Interventions need to expand beyond direct health outcomes and should also encompass wider factors, for example, SRH should include the social, economic and political status of the target study group.[164]
- Need for more innovative intervention strategies required[51,52,143,147,159] especially for male IDPs[150] and adolescent health.[164]

2.3.8 Study quality

Quality of all the included studies was assessed except the study by Cunningham, which was a thesis dissertation with no accessible full text **(Table 2.5 and 2.6)**.[165] Study quality was generally not influenced by the intervention type but rather by the study design. Hence, based on the assessment criteria and consideration of the study setting, majority of the studies were considered strong quality while those with unclear study designs were of weaker quality.[53,78,146,155,159]

Table 2.5 – Summary table of included study quality by study design

Quality	No of studies	Study Design
NA	1	1 Other
Weak	2	1 Can't tell 1 Not stated
Moderate	11	1 Not stated 3 Can't tell 3 Other 3 Cross-Sectional 1 RCT
Strong	14	2 Case-Control 3 Cohort 9 Cross-Sectional 1 Qualitative 1 RCT

Table 2.6 – Quality assessment of included study and authorship information

Author Details	Intervention Type	Study Design	Quality Grade	Affiliated Organisation	Funding Source
Adam 2016[161]	Reproductive health program	Cross-Sectional	Strong	Academic only	None stated
Bohler et al. 2005[149]	Tuberculosis programme	Other	Moderate	Multiple Academic (Includes: National Tuberculosis Program)	None stated
Bolton et al. 2007[150]	Mental health	RCT	Strong	Multiple Academic (Includes: World Vision, War Child Holland)	World Vision, War Child Holland, Ruth and David Levine Foundation.
Cunningham 2011[165]	Reproductive Health	Other	NA	Academic (Bostin University School of Public Health)	NA
Doocy et al. 2006[51]	Water treatment	Case-Control	Strong	Academic (Johns Hopkins University Center for Refugee and Disaster Response)	Partly funded by Procter and Gamble (P&G) that manufactures and markets the product used (PUR)
Elsanousi et al. 2009[52]	Water treatment	Cross-Sectional	Strong	Academic (plus Ministry of Health)	WHO
Garang et al. 2009[151]	HIV treatment: (ART)	Cross-Sectional	Strong	Academic	Rev. Akurdit Ngong, Dr. Darcy James, and Windle Trust Uganda
Goodrich et al. 2013[148]	HIV Care	Other	Moderate	Academic	President's Emergency Plan for AIDS Relief (PEPFAR) and USAID
Hamze et al. 2016[143]	Malaria	Cross-Sectional	Moderate	Academic	Association For Health Innovation in Africa (AFHIA)
Huhn et al. 2006[30]	Yellow fever vaccination	Cross-Sectional	Strong	Multiple non-academic (CDC, WHO, UNICEF, MSF, MoH Liberia)	WHO, UNICEF, MSF-F, and CDC
Humayun et al. 2016[146]	Mental health	Can't tell	Moderate	Not stated	None stated
Jayatissa et al. 2012[78]	Food distribution	Can't tell	Moderate	MoH Sri Lanka	None stated
Kim et al. 2009[79]	HIV treatment	Cross Sectional	Strong	CDC	None stated

Kolaczinski et al. 2006[152]	Malaria treatment and management	Cross Sectional	Moderate	Malaria Consortium	UNICEF
Lee et al. 2009[155]	HRH (Malaria control)	Not stated	Weak	Academic (includes Global Health Access Program, DoH Thailand)	None stated
Morris et al. 2012[147]	MCH Feeding Mental Health	Case-Control	Strong	Multiple organisations (includes WHO, IMC, Maternal and Child Health Integrated Program, HealthNet TPO)	None stated
Mullany et al. 2010[163]	Maternal healthcare	Cross-Sectional	Strong	Multiple (include Academic and Global Health Access Program)	Not explicitly stated. Study is part of project
Nakimuli-Mpungu et al. 2013[153]	Mental health	Cohort	Strong	Academic (including Peter C. Alderman Foundation)	Crown Family Philanthropies, Sarlo Foundation, Weyerhauser Family Foundation, and Foundation de l'Orangerie
Peprah et al. 2016[160]	Cholera vaccination	Qualitative	Strong	Academic and WHO	WHO's OVC stockpile project and the London School of Hygiene and Tropical Medicine.
Pinto et al. 2005[157]	Surveillance	Not stated	Moderate	WHO	Several donors (not listed)
Richards et al. 2009[144]	Malaria control	Cross-Sectional	Moderate	- Academic - Global Health Access Program	Karen Department of Health and Welfare
Sami et al. 2017[162]	Newborn health services	Cross-Sectional	Strong	Academic	Save the Children's Saving Newborn Lives program and by a grant from The Elma Relief Foundation
Sonderegger et al. 2011[154]	Mental health	RCT	Moderate	Family Challenge Australia	None stated
Spencer et al. 2004[158]	Malaria prevention	Cross-Sectional	Strong	Academic (includes MSF, Epicenter, MoH Uganda)	None stated
Steele et al. 2008[159]	Water treatment	Can't tell	Moderate	Academic	None stated
Walden et al. 2005[53]	Water treatment	Can't tell	Weak	Oxfam	European Community Humanitarian Aid Office (ECHO)
Wayte et al. 2008[164]	Sexual and Reproductive Health	Other	Moderate	Academic	None stated
Zhou et al. 2016[145]	Malaria control	Cross-Sectional	Strong	Academic	National Institute of Health and the National Natural Science Foundation of China

Study participant sample selection was generally weak as most were based on convenience and this influenced recruitment processes. Approaches used to minimise bias were not clear in six studies[79,145,146,154,155,157] nor reported or taken into consideration in five other studies.[53,144–146,159,164] However, all comparative studies used groups similar to the intervention groups, but RCTs were not blinded due to ethical reasons.[150,154] When reporting outcomes, confounding factors were considered in 18 studies. However, only six of those studies conducted statistical analysis to adjust for the identified confounders.[79,147,150,151,153,162]

Considering most studies were conducted at one point in time, follow-up assessments were not applicable; however, completion rates were assessed in lieu. Two studies did not qualify for assessing either completion or follow-up because they carried out either a register analysis[149] or qualitative research[160], which required no standard sample size calculation. Of the remaining 26 studies, seven did not report completion rates.[53,144,145,155,157,164] All studies had clear results, which was a key inclusion criterion. However, the majority were based only on self-reported outcomes hence were vulnerable to response bias and limited justification of results.

Four studies reported that the findings were not likely generalizable or replicable,[143,152,159,160] while six studies did not address any point on generalizability.[53,146,148,150,151,164] Eight studies, however, presented clear accounts of outcomes, bias, confounders and stated the outcomes were generalizable.[30,51,78,147,153,158,161,162] Overall, the publications affiliated with academic institutions had the highest number of strong quality studies.

2.4 Discussion

This review identified 28 published studies on health interventions implemented among IDP populations in conflict settings since 2000. This suggested that although human displacement and internal displacement issues have been occurring for a prolonged period (decades), only a small number of studies on intervention programmes had been reported through research publications since the implementation of the global IDP policy. However, the included papers were not representative of all conflict regions with significant IDP populations of over 20,000, as shown in the GRID 2018.[8] This indicated a shortage of health-related interventions in conflict-IDP settings. The high numbers of treatment studies (14 studies), as opposed to the proportion for other PHC elements, showed most interventions were reactive measures to already-existing problems. Therefore, most IDPs may already be in poor health before receiving humanitarian healthcare support.

Several factors were observed to influence intervention implementation, and this included international aid priorities, security, administrative resources (both local and international), ethical issues, politics, IDP migration, stakeholder agreement, seasonal changes, socio-cultural factors, and research tools. Key recommendations from the studies for similar research on health interventions for IDPs and ways to support them included the need for more evaluative assessment of intervention programs; more integrative studies especially in MCH and SRH inventions; increased health education and community involvement; and extension of research duration to allow for long term impact monitoring.

Overall quality of the included studies was high despite the weakness from cross-sectional studies and challenges in conducting research in conflict areas. The main quality weaknesses observed were related to the absence of clear inclusion and exclusion criteria, lack of information on bias and confounders, poor use of stratification and weak generalizability potential. These issues suggested that results of some studies were subject to several biases.

2.4.1 Essential healthcare services provision and outcomes

Studies included in this review were conducted in a variety of settings but represented only 10 LMICs opposed to the presence of high numbers of conflict-induced IDPs (20,000 and above) in 28 LMICs, as at the end of 2017.[8] This revealed a gap in IDP health intervention provision evidence at a global scale. Similar lack of data was observed in other reviews on humanitarian crises health interventions.[64,125,169,170] Although, these studies included natural disaster-affected locations. One review on the impact of WASH interventions on health outcomes identified only six relevant papers between 1980-2014.[125] That review, however, was limited to quantitative studies of interventions provided during the crisis phase not pre- or post-conflict. This observed general limitation of evidence implied it was not possible to carry out comparisons across all eligible locations or different time periods.

The majority of included prevention studies focused on malaria and water-borne diseases, while studies on surveillance and immunisation were scarce. Despite the known fact that numerous outbreaks occurred in humanitarian conditions,[171] only two of the included studies reported on immunisation. Lack of studies on polio, measles, and pneumonia, which are critical conditions and

endemic in most conflict locations and displacement conditions, showed gaps in intervention focus and reporting.[172] Also, most water quality intervention packages did not include sanitation and hygiene despite that being a core recommendation within the Sphere Handbook.[47,125] These missing components were also observed in another review on WASH interventions for diarrhoea reduction in less developed countries.[170] Water quality interventions were however still effective even in the absence of improved sanitation and water supply.[124] Nevertheless, the combination of all three elements (water quality, sanitation, and hygiene) increases the effectiveness and benefits of water treatments.[173]

Food and nutrition intervention yielded only one study, contrary to the higher quantity in the broader review by Blanchet et al., which reported 14 studies in IDP settings.[64] The disparity in the number of studies, seeing that Blanchet et al. included more compared to this current review, suggested food-related interventions were reported more in natural disaster settings. The food and nutrition study included this review was noted to utilise the commonly used humanitarian food distribution approach of rationing.[11] However, the nutritional composition of provided food supplements did not meet the needs of the target population.[37] Further gaps in food and nutrition information were highlighted in another review on the impact of nutrition interventions by Balhara et al.[169] That review identified high variability and low quality of evidence in studies undertaken in humanitarian settings.[169] The authors also suggested interventions need to be tailored to specific groups while taking into consideration the local context and existing health status.[169] That review was however limited to RCTs and observational studies of children aged 0 to 18 years. Nonetheless, the same paper outlined other effective food-related

interventions that could improve nutritional outcomes and these included ready-to-use therapeutic foods, micronutrient supplementation, and food and cash transfers.[169]

Although mental health is not considered a fundamental PHC element, it is a critical intervention area as IDPs can be more vulnerable to prolonged mental health problems.[174] Mental health interventions were the most multi-focused in terms of outcomes of interest and study tools used. This approach aligned with the WHO recommendation on the need to integrate mental health services into other health interventions in emergency settings.[175]

Largely, the most commonly recommended cost-effective intervention was health education, especially around disease prevention of communicable diseases and treatment of NCDs. Integration of education with other interventions but with no related outcomes reported, as observed in the two health education related studies identified,[144,161] resulted in the individual impact from educational interventions not being assessed.

Overall, the most effective interventions were those targeted and able to reach more IDPs, such as the provision of health education, healthcare workers, distribution of resources and disease surveillance. However, only a few such interventions were reported. As a result, the intervention focus within papers included in this review was quite limited compared to the recommended list of health conditions of interest in emergency settings.[176]

2.4.2 Factors influencing health interventions

This review showed that the use of existing structures enhanced intervention success, reduced cost of setting up and encouraged health system

strengthening. In addition, key contributors to high intervention uptake were the availability of free services (e.g. water treatment, ITNs) and awareness of either general health conditions (e.g. FP) or severity of specific diseases (e.g. VPDs such as cholera).

Other key factors that influenced IDP health interventions were the lack of existing framework and accurate population-level data. Most humanitarian interventions rarely reported target coverage, partly because population estimates were non-existent and some intervention effect could not be measured.[177] These factors can lead to wrong population measures of effectiveness as shown in the study by Hynes et al. where camp populations were overestimated, and mortality underestimated.[178]

For treatment interventions, disease stages also contributed to intervention complexity. For instance, adherence and cure of chronic diseases like TB and HIV required certain levels of consistency and were often unpredictable for displaced populations. Hence, IDPs at critical stages of such diseases and not on proper treatment regimen; due to disruption to the health system, migration and poor access, were at risk of several complications including developing resistant strains that were more difficult to manage.[179,180] Similar limitations related to migration, poor infrastructure, late case identification, and inconsistent management were reported in previous studies and within other interventions.[178,181–184] A major weakness in these studies was measurement error, for example, lack of proper differentiation between TB and other acute respiratory infections.[182]

2.4.3 IDP health management and key players

Various stakeholders were involved in IDP intervention implementation. Use of multi-skilled human resources, engagement of local staff, simplified and adapted testing processes were essential health management approaches. Similar factors were displayed in the study by O'Brien et al. on HIV care universal access in the Republic of Congo.[185] This study which described the process of integrating HIV care and treatment into basic health services, showed that capacity building, discussions and continuous dialogue were critical to gaining cooperation from other stakeholders, especially health staff.

Studies comparing IDPs to non-IDPs showed some IDP populations received more interventions and this was reflected in the health outcome measures. Consequently, neighbouring communities around the IDPs needed to be included in interventions provided since non-IDPs likely faced similar adverse effects from the conflicts.[186] A simple approach to expanding interventions, could be to include community-based outreach services within the health programmes. This technique can also be used to improve uptake and early detection of outbreaks.[121]

Contextual elements peculiar to conflict settings, especially insecurity, availability of required resources and background of the local areas, significantly affected intervention implementation.[185] In addition to disruption of local health services and intervention programme interruptions; population instability, lack of skilled staff and poor local terrains, made program implementation difficult.[78,144,150,154,158,163] Therefore, for better IDP healthcare management in conflict settings, evidence from this review strongly suggest the need for increased understanding of local contexts, use of standardised

simple and adaptable tools, effective prioritization of community interventions, and involvement of both local health workers and IDPs.[121,187,188]

2.5 Review limitations

Wide variations in study aims and intervention approach made extensive comparisons difficult and meta-analysis impossible. Also, the use of only English language peer-reviewed articles with quantitative outcome data probably introduced publication bias. As most studies were cross-sectional and had no comparators, attribution and outcome changes could not be assessed effectively.

Grey literature which may have contained relevant information were not included. Although, a wealth of useful information may have been gained from implementation, operational and evaluation reports; the majority lacked research rigour or had overlapping outcome reports. Also, the most relevant and/or current documents may not have been in the public domain. Consequently, this review may not be the best reflection of health interventions in conflict-induced IDP settings. Therefore a separate review could be performed for grey literature and operational research as this could provide valuable information regarding the setting, lessons learnt and better evaluation of public health intervention prioritizations.

Findings from this study were similar to observations in related reviews and showed a clear lack of health intervention evidence in conflict-displacement locations. This implied more publications need to be encouraged to increase focus on implementation science.

2.6 Conclusions

This systematic review demonstrated a variety of intervention programs could be implemented for IDPs in conflict settings and, irrespective of the program package; they could be effective and beneficial to IDPs. However, related evidence was limited and a number of challenges affected the possibility of carrying out rigorous assessments. Also, most studies supported the intervention effectiveness evidence with appropriate statistical tests.

Consequently, documentation of past intervention experiences was strongly encouraged to support future development strategies and ensure more cost-effective interventions were designed for conflict-disaster settings.

In line with this, this PhD research explored the essential health services provided to IDPs affected by the Boko Haram conflicts, and who were residing in camp settings as of 2016. The research also explored the health status of IDPs and assessed these against the resources utilized. Factors that influenced the provision of needed resources and stakeholder involvement were also considered.

Therefore, this PhD research aimed to identify the health-related interventions provided and utilised by IDPs in Nigeria. Identified findings were then used to assess the IDP health needs and outcomes; as well as the management context that influenced the provision of the required resources.

3 RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the philosophical and theoretical paradigm underpinning this research. Also described is the methodological approach used to gather required data needed to assess the health-related services available to IDPs living in camp-like settings in Northern Nigeria.

An overview of the study setting, general sampling methods, and the rationale for choosing the selected data collection techniques, is outlined in detail. Procedures used to gain access into the IDP camps, ethical approval, security considerations, data collection and research management are also elaborated. Specific methodological details for the individual study are described in their respective chapters **(Chapters 4 to 6)**.

The chapter concludes with a reflexive statement, which discusses the researcher's frame of reference and factors influencing design consideration, research procedures, and the study write-up process.

3.2 Theoretical perspective

Most research studies have clear philosophical paradigms that underpin the the adopted approaches. Research paradigms are belief systems representing the current reality of what is known, how that is known, and how data and evidence are collected.[189,190] Therefore, the paradigm for this study is based on the acknowledged absence but identified need for more evidence related to IDP healthcare management. These include the identified resource availability gaps and challenges at local and global levels, as shown in the introduction and systematic review chapters **(Chapters 1 and 2)**. These

factors shaped the methodological approach used as well as the data collection techniques, tools, procedures, and participant selections.

3.2.1 Research philosophy

The research adopted a post-positivist worldview, which is a modernised version of positivism.[191–193] Positivism is the belief that reality exists in what can be sensed and verified through rigorous scientific processes.[191–193] However, post-positivists also take into consideration that people are often partially biased in their perceptions of reality; hence more context is required.[192] As such, a more critical outlook is therefore adopted in a post-positivist theoretical view compared to positivism, which relies solely on what is scientifically verified or logical.[194]

Post-positivists, therefore, do not believe in fixed causes and effects; but acknowledge the possibility that connections may or may not exist between the two factors, and evidence observed can vary and be very subjective.[195] Consequently, post-positivists believe true reality can only be approximated and never explained perfectly or completely.[192,194]

The post-positivist philosophical framework was considered for this research as opposed to other theoretical frameworks because it took into consideration the independent reality presented by participants; which although may be factual, could still be fallible.[192] Hence, it was acknowledged that the feedback provided by participants in this research were likely to be subjective and only relevant to individual circumstances. Therefore, information received was approximated and not taken as the full picture for all IDP health management processes.

Recommended methodologies for post-positivism are experimental and survey research designs which use questionnaires, focus group and interview methods for data collection.[189] All three data collection techniques were adopted in this study. However, the qualitative data collection process strategically adopted an interpretivist perspective.[193] Inclusion of this technique allowed participants to interpret or describe their lived experiences, as well as permitted the discovery of other interesting related factors which may not have been included in the original set of research questions. Furthermore, the research also aligned with the interpretivist recommendations of using individual levels as the basic unit of analysis, and this is mainly achievable through interviews.[193]

3.2.2 Methodological approach

Although the CMT and Sphere guidelines advocate the adoption of multi-disciplinary and multi-methods approaches when assessing displacement issues, they do not offer specific frameworks to inform displacement management assessments.[13,47] Consequently, the complex nature of displacement and lack of previous IDP methodological studies demanded adaptation and development of new data instruments required to effectively answer the research questions in this PhD study.

As such, this thesis applied a mixed-method study design and comprised of three linked studies: camp audit (study 1), cross-sectional survey (study 2), and a qualitative component using focus group discussions (FGDs) and semi-structured interviews (study 3). Incorporation of the different study designs provided greater understanding of the research problem.

Using a mixed-method approach helped draw on the strengths and minimise the weaknesses of both quantitative and qualitative study designs.[196,197] For instance, since the reliability of quantitative data depended on the quality of responses, the qualitative studies provided supporting context associated with the feedback provided. Conversely, the qualitative research nature of being subjective and vulnerable to researcher bias was balanced by the objectivity of the quantitative study which ensured related evidence was valid.[198,199] As a result, a mixed-method approach offered stronger methodological diversity compared to a mono-method research.[197]

The first two studies sought to assess the camp environment, available resources, and IDP health outcomes. While the last study explored the management perceptions of various stakeholders through FGDs with IDPs and one-to-one interviews with camp managers (CMs), health service providers (HSPs) and national administrative policymakers (APMs).

The sampling and time sequence adopted for this research was parallel and concurrent, respectively.[200,201] Parallel sampling meant, where necessary, the qualitative and quantitative components were collected from different participants within the same population (i.e. FGDs). While the concurrent time sequence implied data for all the studies were collected at the same time period, as opposed to a sequential approach which required completion of one study before progressing onto another.[200,201]

Although data was collected at the same time, analysis was however done separately. Hence, a mono-analysis technique was adopted.[201] Here, each study and data set were analysed individually and later triangulated in the integrative discussion **(Chapter 7)**. Specific methodologies utilised for each

study are presented in their respective chapters, as well as their strengths and limitations.

The described philosophical and methodological approaches were carefully selected and adopted while taking into consideration the complexity, sensitivity and subjective nature of this research. Therefore, the selected data collection approaches were deemed most appropriate as opposed to other experimental or narrative techniques.[193]

3.3 Study setting

This research focused on IDPs resulting from the Boko Haram conflict who resided in camps or camp-like settings in Nigeria. The term 'camp or camp-like settings' (hereon referred to as camps), as described in the DTM assessment, included all types of camps, collective and transitional centres used as IDP settlements **(see Section 1.2.1)**.

A comprehensive list of IDP locations was collected from NEMA.[202] The list comprised of host communities, formal camps (locations officially authorised by NEMA) and informal camps (camps not officially authorized). Most locations were not verifiable or no longer served as locations for IDPs at the time of data collection. This research focused only on IDPs in camp-like settings as opposed to IDPs living within host communities. Selected sites were randomly sampled based on the IDP population size in each state, NEMA recognition status (i.e. location affirmation from the national authorities) and security clearance.

Geographically, Nigeria has two regions (north and south) split into six geopolitical zones, as previously described **(see Section 1.2)**. According to

the December 2015 DTM assessment,[203] all IDPs from the Boko Haram crisis had settled in 13 states within the northern region, as shown in **Figure 3.1** below.

- **North-central zone**: 4 States (Benue, FCT, Nasarawa and Plateau states)
- **North-west zone**: 3 states (Kaduna, Kano, and Zamfara states)
- **North-east zone**: 6 States (Adamawa, Bauchi, Borno, Gombe, Taraba, and Yobe states)

Figure 3.1 – Map of Nigeria showing IDP settlement states as of December 2015



3.3.1 Study location sampling

For this research, 50% of locations where IDPs had settled were considered, and this was rounded up to seven states. To ensure adequate representation, states were sampled from each zone; two states from the north-west and north-east zones respectively, and three states from the north-central zone.

Selected states for this research were those with the highest numbers of IDPs living in camp settings within each zone **(Table 3.1)**. Therefore, the seven states selected were Borno and Taraba (north-east), Kaduna and Kano (north-west); and FCT, Nasarawa, and Plateau states (north-central).

Table 3.1 – Distribution of IDP population by state and accommodation type based on DTM December 2015 report

No.	Geopolitical Zone	States	Percentage of IDPs residents in camps or camp-like sites	Percentage of IDPs in Host Community	Approximate Number of IDPs living in Camps
1	North-Central	Benue	0.51%	99.49%	2,131.8
2	North-Central	*FCT	52.83%	47.17%	220,829.4
3	North-Central	*Nassarawa	8.06%	91.94%	33,690.8
4	North-Central	*Plateau	10.72%	89.28%	44,809.6
5	North-East	Adamawa	6.50%	93.50%	27,170
6	North-East	Bauchi	2.12%	97.88%	8,861.6
7	North-East	*Borno	8.21%	91.79%	34,317.8
8	North-East	[+]Gombe	0.00%	100.00%	0
9	North-East	*Taraba	10.68%	89.32%	44,642.4
10	North-East	Yobe	6.22%	93.78%	25,999.6
11	North-West	*Kaduna	5.58%	94.42%	23,324.4
12	North-West	*Kano	1.07%	98.93%	4,472.6
13	North-West	[+]Zamfara	0.00%	100.00%	0
Total					**470, 250**
*= States selected in the study [+]= States with no government confirmed official camps					

3.4 Ethical clearance and security obligations

Ethical clearance was received from the Nigerian National Health Research Council (*Reference number: NHREC/01/01/2007-08/06/2016*), and the University of Nottingham Medical School Ethics Committee (*Reference number: OVSb12072016*). Permission to visit the IDP camps was granted by

the National Emergency Management Agency (NEMA) (*Reference number: NEMA/PRF/III/II*) **(Appendix 3.1 - 3.3)**.

Security access into each camp was obtained verbally prior to data collection. For high-risk locations, security personnel accompanied the research team throughout the data collection process. At locations suspected of potential violence, security staff advised against visiting those areas or to leave if the data collection teams were already present in the affected sites, as was the case in most areas in Borno state.

Ethical responsibilities were also considered for engaging with the research participants. Therefore, information sheets and consent forms were provided to each participant **(Appendix 3.4 - 3.7).**

3.5 Data collection process

The researcher was responsible for the recruitment and training of all data collection staff (interviewers), leading the pilot study phase, and daily remote monitoring of the entire data collection process. Initial training, pilot study and field pre-test were conducted between July and August 2016, while the main data collection was carried out in September and October 2016.

3.5.1 Recruitment and training of field staff

Data collection staff were recruited locally in Nigeria from two organisations: Peachaid Medical Initiative and Browns Consulting Ltd. These organisations were selected for their experience of working in the study regions and were not affiliated to any IDP stakeholder organisations. Individual recruitment criteria included cultural awareness, local language proficiency, data collection experience and an open attitude to learn. Significant emphasis was placed on

recruiting at least 50% female interviewers to avoid being denied access into the households, considering the Islamic customs in the region did not always permit males to enter female homes or speak directly with them. A total of 18 interviewers were selected and split into three teams. Each team had six interviewers, which included a supervisor responsible for fieldwork coordination and monitoring.

Training of the interviewers included an introduction to the research background and data collection instruments, as well as practical field guidance, techniques and standard procedures. Each study question was explained in-depth to ensure appropriate understanding. Other issues addressed included security vigilance, ethical considerations, consent, confidentiality, and data management. Team supervisor roles also included management responsibilities such as using a daily checklist for debriefing the teams, identifying key individuals at each camp on their first day of arrival, planning FGDs and interviews, collecting related evidence for example pictures, reviewing and storing completed data collection instruments. The training was conducted over three sessions.

3.5.2 Pilot study: Data collection instrument pre-testing

The pilot study was conducted to enhance the validity of the study instruments. The questionnaires, interview guides, participant recruitment protocol, and data instrument administration were all pre-tested.

Initially, Bauchi state one of the non-selected state in the north-east was chosen for the pilot study, but at the time of data collection, all IDP camps there had been disbanded. Hence, testing was done at Apo IDP Camp in the FCT, and this camp was later excluded from the list of sites considered for the

main study. Six households were sampled for the survey, as well as one audit, FGD, and interview with each stakeholder representative (CM, HSP, and APM).

Following this, minor amendments were made to the IDP survey questionnaire, whilst the other documents remained unchanged. Updates made were related to providing further clarification on definitions like “household“ and “accommodation number“, as well as clarifying time-periods for questions related to events occurring “before“ or “after“ or “while in“ the camp. At the end of the questionnaire, a section for note-taking was also added to capture relevant comments from the IDPs which were not covered in questions asked.

3.5.3 Main study data collection

Data collection for the main study was conducted in either English or Hausa languages. Two teams were responsible for the 2 of 3 states in the north-central zone, and one team was responsible for the north-west and north-east zones, including Plateau state (five states). The split was uneven because the north-central zone accounted for over 50% of sampled IDPs. All data collection was conducted on the camp premises or at the office of selected participants (for HSPs and APM interviews).

Throughout the data collection period, daily feedback was given to the researcher. Also, after data collection activities in each state, in-depth fieldwork debriefs and reports were submitted by the team supervisors.

3.6 Reflexive statement

Reflexivity is used by researchers, particularly in qualitative research, to present greater sensitivity around the context of their work, towards ensuring quality.[204] Hence, it is a means of identifying personal interest, values, interpretations and establishing a sense of research accuracy.[198,205] This approach encourages scientific rigour to be taken into consideration at different stages of the research process, including sampling, data collection, analysis, response validation, and triangulation.[198]

At the time of data collection, the researcher was working as a primary healthcare monitoring and evaluation associate in some states where the IDPs had settled (Kano and Kaduna states). However, the areas of work did not include IDP healthcare; hence no pre-conceived notions of IDP healthcare management influenced the research design. In addition, considering the main data collection was not done directly by the researcher, personal influence at that phase was eliminated. During the analysis, interpretation and reporting phases, subjective influences were reduced by using specific research theoretical perspectives, analytical guidelines, result validation, and continuous supervision reviews. These ensured impositions of personal opinions on the findings were minimised.

For this research, IDPs from all age groups were included in the survey, and their lived experiences were assessed. Depending on the roles played in internal leadership, some IDPs were also engaged in FGDs to offer further insights. CMs were sometimes involved in all study components, including the key informant interviews, especially in camps run by only IDPs. It is therefore likely, that use of the same participants for the different studies may have

influenced their willingness and responses. However, the inclusion of different study methods and other non-IDP participants (HSPs and AMPs) minimised possible related bias.

Considering the high level of need among the IDPs, it is possible information provided was from a place of desperation. Hence, data presented may have been offered with the intent to instigate pity and inspire provision of donations directly or indirectly from the research team or as an output from the research. The interviews were, however, conducted in a neutral manner[206] to avoid creating a judgemental atmosphere or encourage certain types of responses. Also, the absence of incentives before the data collection minimised the possibility of a Hawthorne effect, where responses provided were modified based on what the participant perceived as the interviewers' expectations.[207–209]

To further minimise bias and prejudice, bracketing was incorporated. Bracketing is an act of suspending personal judgment, rather focusing solely on analysing the participants' described experiences.[205] As a result, the researcher's current understanding and knowledge were 'bracketed' as best as possible to allow the collected data to speak for itself and not be influenced by preconceptions.[193] The bracketing process considered the researchers part, and likely influence, at all stages of the research as indicated earlier.[205,210,211] At the inception phase, this included selecting multiple study locations, participants, tools and methods. At the literature review phase, the researcher expanded the review scope beyond the country, region and common areas of interest. While at the data collection stage, the inclusion of questions not directly related to health resources and the interpretivist data

collection strategy implied that participants often determined the interview direction. Finally, the use of an inductive qualitative data analysis approach[212] and triangulation of the findings also encouraged effective bracketing.[205,211] Overall, bracketing ensured the analysis was neutral, interpretations were valid within the context they were provided, and presentation of the findings was robust.

Subsequent double coding of selected qualitative study transcripts by one supervisor (PS) and codebook review by two other supervisors (ST and RM) also enhanced the transparency, validity, consistency, and applicability of the themes and subthemes.[213,214] Constant comparison of data within each participant group dataset further ensured the exploration of contextual meaning based on individual and group points of view; while comparing across different groups facilitated the search for regularities and confirmability.[215]

Overall, the use of multiple sites, mixed-method study design, data collection approach, bracketing, double-coding, and data triangulation approach enhanced the research quality, credibility, validity, consistency and reliability of the findings.[199]

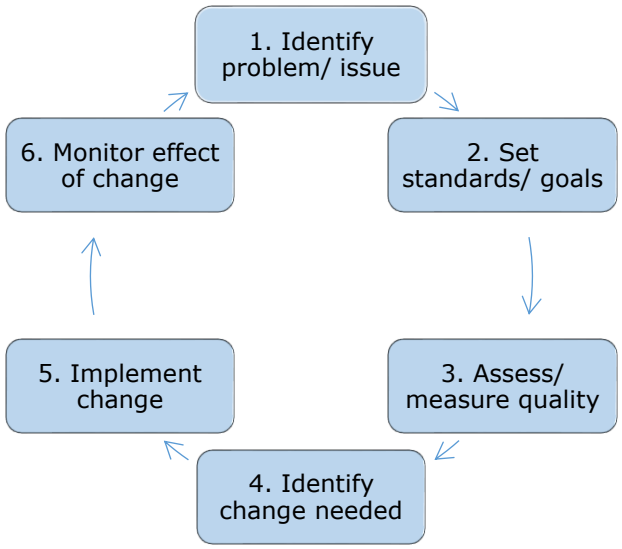
4 CAMP ASSESSMENT (AUDIT STUDY)

4.1 Introduction

Management and intervention support for IDPs are primarily focused on those in camp-like settlements.[13] Although some research on health and wellbeing of IDPs in Nigeria have been conducted, there is limited knowledge about the availability of basic resources and understanding of how camps are managed. Such evidence is required to deliver coordinated life-saving assistance to IDPs effectively.

The audit component of this research aimed to assess IDP camp living conditions in relation to international standards. An audit is the monitoring of services, resources or performances against pre-defined standards.[216] An audit evaluates processes and is used to verify true representations. The approach is generally objective and quick, and tools used for audits are usually easy to implement and have well-defined processes.[217] **Figure 4.1** shows the six basic stages in an audit process.

Figure 4.1 – Illustration of an audit cycle



The camp audit within this research focused on the first four stages of the audit cycle, which centres on “identification”. Observations from this would provide an overview of the IDP situation and could be used to inform proper action planning and monitoring at the last two stages.

Therefore, this chapter focuses on the assessment of the IDP camp environment, resources, living conditions, health-related services, and general management procedures against the Sphere minimum standards.

4.2 Methods

Camp selection was determined by location validity, IDP population size, security considerations, and accessibility. The target sample size for this study was 1-2 camps per selected state, with an intended maximum of 14 camps (at two camps per selected state).

4.2.1 Camp settings

The audit was conducted through direct observations and interviews with CMs **(Table 4.1)**. All camps visited were established between 2012 and 2015, and spread across both rural and urban locations. Other details like the settlement type, population, household size, and resources are shown in the results section, within the related sectors.

Table 4.1 – Background information of camps visited for this study

Geopolitical Zone	State	Camp Name	Established Date	Camp Location Type
North-Central	FCT	Durumi	2012	Rural
North-Central	FCT	Kuchingoro	2012	Rural
North-Central	Nasarawa	Gurku	2013	Rural
North-Central	Plateau	Stefanos Foundation	2014	Urban
North-East	Borno	Bakassi	2015	Urban
North-East	Taraba	Mullum	2014	Rural
North-East	Taraba	Gullum	2014	Rural
North-West	Kaduna	Kyauta	2014	Urban
North-West	Kano	Gaida	2014	Urban

4.2.2 Audit assessment tool (Camp checklist)

Factors considered for auditing were determined using the Framework for Assessing, Monitoring and Evaluating (FRAME) Toolkit's Rapid Environmental Assessment guideline[218] and the Collective Centre Guidelines.[81] Both documents outlined the major considerations related to the services and environment of displaced populations living in communal areas.

Other documents such as the Oxfam Guidelines for Public Health Promotion in Emergency,[101] UNHCR Environmental Guidelines,[18] and Camp Management Toolkit[13] were also reviewed to identify universally used terminologies.

The Guidelines for Public Health Promotion in Emergency[101] presented guidance for public health factors to be considered, varied assessment techniques, analysis plan, and interpretation. The UNHCR Environmental Guideline[18] emphasised the key areas of interest at different stages of emergencies and guidance on how they could be addressed; while the Camp Management Toolkit[13] presented a comprehensive review of all issues related

to the management of displaced populations with various resources, tools, and case studies.

Text Box 4.1 – FRAME Toolkit

Framework for Assessing, Monitoring and Evaluating (FRAME) Toolkit

Collection of guidance and tools developed to use as field instruments when conducting environmental assessment, monitoring and evaluation during refugee-related operations.

Text Box 4.2 – UNHCR Environmental Guidelines

UNHCR Environmental Guidelines

Framework for identification and evaluation of a range common environmental impacts associated with a specific refugee or returnee situation. Also used to identify and evaluate opportunities to undertake positive environmental interventions.

Text Box 4.3 – Guidelines for Public Health Promotion in Emergency

Guidelines for Public Health Promotion in Emergency

Outlined guidance on key public health factors, assessment techniques, analysis plan and interpretation required for taking action to reduce public health risks in emergency settings.

Text Box 4.4 – Collective Centre Guidelines

Collective Centre Guidelines

Resource focusing on management structures used for collective and communal settlement of displaced populations. Provides practical advice on the best displacement settlement coordination and management approaches.

The adapted audit assessment tool captured the key areas related to displacement settlements and living conditions. Data collected included the camp details, population demography, camp resources and intervention programs **(Appendix 4.1)**. **Table 4.2** below presents a summary of the audit tool and the source document for each question.

Table 4.2 – List of audit study questions and source documents

No.	Questions	Source Document
1	Date of camp establishment (arrival of first IDPs)	Collective Centre
2	Camp Location	
3	Camp type	
4	Shelter	FRAME
4a	Type of shelters	FRAME
4b	Number of shelters	Oxfam/UNHCR
5	Water source	FRAME
5a	Type of water	Oxfam
5b	Number outlets	
5c	Distance to water source	
6	Sanitation	FRAME
6a	Type of toilets	Oxfam/UNHCR
6b	Presence of drainage for wastewater	
6c	Method of solid waste management	
7	Has a needs assessment been carried out on this camp?	Oxfam/UNHCR
8	Number of households on camp	Collective centre
9	Average size of households -	
10	Number of men	
11	Number of women	
12	Number of children	
13	Ethnic/Religion/Tribal compositions	
14	Are there healthcare staff resident on the camp? Which cadre? How many?	Collective centre/Oxfam
15	Are there visiting health staff? Which cadre? How many? Frequency of visit?	
16	Is there a Health service post on camp?	
16a	If no, in cases of emergency is there a designated health centre where IDPs are treated? Where? How far?	
17	Are there basic health commodities present on camp? List.	
18	Is there a distribution system on the camp for the following: Food, Non-Food Items (NFIs), and Medical aid? What is the basis for this distribution system?	Collective centre
	Are the following interventions done on this camp:	Collective Centre
19	Poverty eradication interventions	

20	Water, Sanitation, and Hygiene (WASH) interventions	
21	Protection interventions	
22	Medical aid interventions	
23	Health education interventions	
24	Immunisation interventions	

4.2.3 Audit data collection

The audit tools were administered by team supervisors to individuals responsible for IDP daily activities in each camp. Except for two sites, Bakassi and Stefanos Foundation (hereon called Stefanos) camps, these responsible persons were IDP camp leaders/chairmen, who were also displaced persons themselves. Data collection was carried out through discussions with the IDP leaders and physical observations. A total of nine audit assessments were completed, one in each camp visited.

4.2.4 Audit analysis

Data on the camp characteristics and resource availability findings for each camp were reviewed against the selected Sphere minimum standards.[47] Some standards were assessed based on responses from more than one question. Conversely, some questions were also used to assess more than one standard.

A 3-point scoring system was used to grade each standard. The three scores were “met”, “partially met” and “unmet”. For a standard to qualify as “met” it must have been implemented in all nine camps. Standards graded “partially met” (P.Met) were those implemented in six or more camps, while standards achieved in five or less camps were categorized as “unmet”.

Table 4.3 presents a summary of the selected standards, related audit questions and assessment criteria used to grade the findings.

Table 4.3 – List of selected audit standards and assessment questions

Sector	Standard	Audit Question (number)	Assessment Criteria
Water Supply, Sanitation and Hygiene (WASH)	***Audit Standard 1:*** Access and water quantity	Water Source: Type and distance (no.5a&c)	**Met:** Very close **P.Met:** Not too far **Unmet:** Very far
	Audit Standard 2: Environment free from human faeces	Sanitation: Type of Toilet (no.6a)	**Met:** Water closet and close OR Pit (Very Far) **P.Met:** Pit AND Not too close **Unmet:** Pit AND Very Close OR Outdoors
	Audit Standard 3: Appropriate and adequate toilet facilities		**Met:** Water closet with close water source AND/OR Pit (only) **P.Met:** Pit (not too far) **Unmet:** Outdoors (not too far) AND Pit (very close AND Not too Far)
	Audit Standard 4: Collection and disposal	Sanitation: Presence of wastewater drainage and Method of solid waste management (no.6b&c)	**Met:** Burning **P.Met:** Burying AND Burning OR Burying (only) **Unmet:** Throwing on ground
	Audit Standard 5: Physical, environmental and chemical protection measures		**Met:** Use the same as above **P.Met:** Use the same as above **Unmet:** Use the same as above
	Audit Standard 6: Hygiene promotion implementation	Intervention Programmes: WASH and Health Education (no.20,23)	**Met:** WASH AND H.Education **P.Met:** WASH OR H.Education **Unmet:** No WASH OR H.Education
Shelter, Settlement and Non-Food Items (NFI)	***Audit Standard 7:*** Strategic planning	Camp Location and Type (no. 2-3) Shelters: Type and numbers (no. 4a&b) Needs Assessment (no. 7)	**Met:** Camp type (planned only) **P.Met:** Other camp types - with concrete shelter NOT dispersed OR Transit **Unmet:** Other camp types with thatch and aluminium OR Dispersed/Self-settled
	Audit Standard 8: Covered living space	Shelters: Type (no. 4a)	**Met:** Concrete **P.Met:** Planned (tent) **Unmet:** Mud OR Aluminum OR Other camp type tents
	Audit Standard 9: Individual, general household and shelter support items	Presence of distribution system (no. 18)	**Met:** distribution system exists for Food AND NFI And Medical WITH clear Criteria **P.Met:** distribution system exists for Food OR NFI OR Medical Aid OR all 3 WITH NO clear Criteria **Unmet:** No distribution system
Health Action	***Audit Standard 10:*** Health service delivery	Health service post on camp (no.14) Health centre and emergency options (no.16)	**Met:** Health Post on camp **P.Met:** Health Post Not Far **Unmet:** No Health Post

	Audit Standard 11: Prioritising health services		**Met:** Health Post Not Far AND Health staff **P.Met:** Health Post Not Far AND Visiting health Staff **Unmet:** No Health Post close AND no visiting health staff
	Audit Standard 12: Human resources	Healthcare staff resident on the camp (no.14) Visiting health staff (no.15)	**Met:** Resident AND Visiting Skilled Health Staff **P.Met:** Resident OR Visiting Skilled Health Staff **Unmet:** No Skilled Health Staff
	Audit Standard 13: Drugs and medical supplies	Basic health commodities present on camp (no.17)	**Met:** Has some items P.Met: NA **Unmet:** Have no items
	Audit Standard 14: Communicable disease prevention	Intervention Programmes: WASH, Health Education, and Immunisation (nos.20,23-24) Sanitation (no.6)	**Met:** WASH AND Education AND Immunization **P.Met:** H.Education OR Vaccination **Unmet:** No Immunisation OR H.Education Only
	Audit Standard 15: Prevention of vaccine-preventable diseases	Immunisation (no. 24)	**Met:** H.Education AND Immunisation **P.Met:** Vaccination Only **Unmet:** No H.Education OR Vaccination

4.3 Results

Table 4.4 shows that only two camps (Bakassi and Gurku) were officially selected or structured by the national authorities (planned). The other sites were either temporary shelters used immediately after displacement or before relocation/return (transit camps); or self-settled camps which were the majority.

Dispersed settlements were also self-settled. However, although under one camp leadership, they were scattered across different locations and had wide distances between shelters. For instance, Gaida camp in Kano state was situated in two different areas: Sharada and Panshekara, both in Kumbutso LGA, and the distance between these locations was about 5km.

Table 4.4 – Camp demographic characteristics

State	Camp Name	Camp Type	Approximate Number of Households	Average Household Size	Religious Composition
Borno	Bakassi	Planned	1739	6	Muslim
FCT	Durumi	Self-settled	375	19	Muslim Christian
FCT	Kuchingoro	Self-settled	532	10	Muslim Christian
Kaduna	Kyauta	Dispersed	4,000	10	Muslim Christian
Kano	Gaida	Dispersed	>100	21	Muslim
Nasarawa	Gurku	Planned	600	20	Muslim Christian
Plateau	Stefanos	Transit	61	7	Christian
Taraba	Mullum	Dispersed	212	7	Muslim Christian Pagans
Taraba	Gullum	Transit	47	8	Christian

Religious and ethnic composition for each camp varied. Most IDPs in Bakassi and Gaida camps were Muslims; Stefanos and Gullum camps had mainly Christians; while the other camps had a balanced mix of both. Some IDPs identified themselves as being from the two most common ethnicities in the northern region: Hausa and Fulani. However, there were several sub-tribes, and this included Gwoza, Kanuri, Marghi, Michika, Baburu, Karikare, Glavda, Mandara, Afkabiy, Chibok, and Mumuye. The largest proportion of IDPs were from the Gwoza sub-tribe, which were IDPs from the most conflict-affected region in Borno state.

Number of households ranged from 47 in Gullum camp to 1739 in Bakassi camp. However, CMs in Kano and FCT (Kyauta, Durumi and Kuchingoro camps) were unsure but estimated the household numbers to be over 100, 375 and 532 respectively. Kyauta camp reported having 4,000 shelters, but these included housing units of local non-IDP residents who lived within the IDPs dispersed settlement range. This factor caused some confusions on

whether the site was a camp-like setting or a host-community. On the other hand, the average household size, which represented the number of people living in the same accommodation, ranged from 6 to 21 persons per shelter.

4.3.1 Summary of audit findings

The table below shows an outline of all the standards reviewed, summary of the audit results against each standard, and the grades attained **(Table 4.5)**.

Table 4.5 – Summary of audit findings and attainment of standards

Sectors	Audit Standards		Audit Questions (number)	No. of Qualified Camps (n= 9 Camps)	Standards Attainment
WASH sector	1	Access and water quantity	Water Source: Type and distance (no.5a&c)	8 borehole, 1 well 2 very close, 6 Not too far, 1 very far	Partially met
	2	Environment free from human faeces	Sanitation: Type of Toilet (no.6a)	8 pits, 2 water closet, 2 outdoor	Unmet
	3	Appropriate and adequate toilet facilities			Partially met
	4	Waste Collection and disposal	Sanitation: Presence of wastewater drainage and Method of solid waste management (no. 6b&c)	1 drainage, 8 have no drainage 5 Throwing on ground, 4 Burning, 2 Burying	Unmet
	5	Physical, environmental and chemical protection measures			Unmet
	6	Hygiene promotion implementation	Intervention Programmes: WASH and Health Education (no. 20,23)	4 WASH, 5 Health Education	Unmet
Shelter, settlement and non-food items	7	Strategic planning	Camp Type (no.3) Shelters: Type and numbers (no.4a&b) Needs Assessment (no.7)	2 Planned, 2 Self-settled, 3 Dispersed, 2 Transit 2 Tent, 1Thatch, 1 Mud, 4 Concrete, 2 Aluminium, and Polyester 4 camps	Unmet
	8	Covered living space	Shelters: Type (no.4a)	2 Tent, 1Thatch, 1 Mud, 4 Concrete, 2 Aluminium, and Polyester	Partially met
	9	Individual, general household and shelter support items	Presence of distribution system (no.18)	7 Food distribution, 7 NFI distribution, 5 Medical Aid Approach: 2 Household, 2 Age, 1 Family, 1 Gender, 1 Disease, 1 Malnourishment level, 2 Don't know	Partially met

Health Action	10	Health service delivery	Health service post on camp (no.14)	6 camps with accessible health services (on camp, visiting or emergency options)	Partially met
	11	Prioritising health services	Health centre and emergency options (no.16)		Unmet
	12	Human resources	Healthcare staff resident on the camp (no.14) Visiting health staff (no.15)	4 health staff resident, 4 health staff visiting	Unmet
	13	Drugs and medical supplies	Basic health commodities present on camp (no. 17)	3 camps	Unmet
	14	Communicable disease prevention	Intervention Programmes: WASH, Health Education, and Immunisation (no.20,23-24) Sanitation (no.6)	4 WASH, 5 Health Education, 5 immunisation Sanitation (mixed)	Unmet
	15	Prevention of vaccine-preventable diseases.	Immunisation (no.24)	5 camps	Unmet

4.3.2 Water, Sanitation, and Hygiene (WASH)

4.3.2.1 Water supply

The WASH Access and Water Quantity standard **(Text box 14)** was "partially met". Overall, the camps achieved the availability of water supply criteria, but accessibility attainment varied.

Text Box 4.5 – Water accessibility standard

Audit Standard 1

WASH - Water Supply Standard 1: Access and Water Quantity

All people have safe and equitable access to a sufficient quantity of water for drinking, cooking and personal and domestic hygiene. Public water points are sufficiently close to households to enable use of the minimum water requirement.

Main water sources were boreholes, and only Gaida camp used wells **(Table 4.6)**. The number of water outlets, for both boreholes and wells, varied from 1 to 9. Average distances from the households to water sources in some camps fell short of the required recommendations. According to the Sphere

guidelines, the minimum distance between shelters and water sources or distribution points should be 500m, while the recommendation by UNHCR was 200m or a few minutes' walk.[13] **Table 4.7** shows the variation in minimum standards between the guidelines.

For this study, distances identified as "Very close" were less than 200m, "Not too far" were less than 500m away and "Very far" were within 500m-1km away from the households. Four camps fell slightly short of the UNHCR standard in being "Not too far", while Mullum camp with up to 1km walking distance to the water source did not meet any of the recommended maximum standards.

Table 4.6 – Sources and distribution of camp water supply

State	Camp Name	Water Source	Number of Water Outlet	Distance to Water Source
Borno	Bakassi	Borehole	7	Not too far
FCT	Durumi	Borehole	3	Not too far
FCT	Kuchingoro	Borehole	1	Not too far
Kaduna	Kyauta	Borehole	3	Not too far
Kano	Gaida	Well	9	Very close
Nasarawa	Gurku	Borehole	3	Not too far
Plateau	Stefanos	Borehole	5	Very close
Taraba	Mullum	Borehole	2	Very far
Taraba	Gullum	Borehole	1	Not too far

Table 4.7 – Variation of minimum standards for distance to water sources

Indicator	Parameters	Sphere Standards	UNHCR Standards
Standard Distance	Minimum distance from individual shelters to a water source	500m	200 (or a few minutes to walk)
Used in this audit assessment	Very close	< 200m	
	Not too far	200m – 500m	
	Very far	>500m	

4.3.2.2 Disposal of excrete

WASH Excreta Disposal standards 1 and 2 recommend toilet facilities to be sufficiently close to household dwellings but still a fair distance away to prevent food and water contamination. The Excreta Disposal standard 2 **(Text Box 15)** was “partially met”, but standard 1 **(Text Box 16)** was “unmet”.

Text Box 4.6 – Environment free from human faeces standard

Audit Standard 2

WASH-Excreta Disposal Standard 1: Environment Free from Human Faeces

The living environment in general and specifically the habitat, food production areas, public centres and surroundings of drinking water sources are free from human faecal contamination.

Text Box 4.7 – Appropriate and adequate toilet standard

Audit Standard 3

WASH-Excreta Disposal Standard 2: Appropriate and Adequate Toilet Facilities

People have adequate, appropriate and acceptable toilet facilities, sufficiently close to their dwellings, to allow rapid, safe and secure access at all times, day and night.

Table 4.8 shows that the main toilet facilities, as used in eight camps, were pit latrines and the second most common defecation locations were outdoor bushes. Gaida and Stefanos camps had water closet toilets used in combination with pit latrines.

Despite the availability of pit latrines, which are acceptable for excrete disposal, the use of outdoor open-space defecation was still common. Such

practices are inappropriate, and also, open defecation increased the likelihood of faecal contamination of water, food and other public areas.

Table 4.8 – Approaches to camp excreta and solid waste disposal

State	Camp Name	Water Source	Distance to water source	Type of toilet	Solid waste management
Borno	Bakassi	Borehole	Not too far	Pit	Burning
FCT	Durumi	Borehole	Not too far	Pit	Throw on ground
FCT	Kuchingoro	Borehole	Not too far	Pit	Throw on ground
Kaduna	Kyauta	Borehole	Not too far	Pit Outdoors	Throw on ground
Kano	Gaida	Well	Very close	Pit Water closet	Burning
Nasarawa	Gurku	Borehole	Not too far	Pit	Burning Burying
Plateau	Stefanos	Borehole	Very close	Pit Water closet	Burying
Taraba	Mullum	Borehole	Very far	Outdoors	Burning Throw on ground
Taraba	Gullum	Borehole	Not too far	Pit	Burning Throw on ground

4.3.2.3 Solid waste management and vector control

The Solid Waste Management-Collection and Disposal; and Vector Control-Protection Measures standards were reviewed together **(Text Box 17 and 18)** and both were “unmet”.

Text Box 4.8 – Solid waste: Collection and disposal standard

Audit Standard 4

WASH - Solid Waste Management Standard 1: Collection and Disposal.

The affected population has an environment not littered by solid waste, including medical waste, and has the means to dispose of their domestic waste conveniently and effectively.

Text Box 4.9 – Physical, environmental and chemical protection measures standard

Audit Standard 5

WASH-Vector Control Standard 2: Physical, Environmental and Chemical Protection Measures.

The environment where the disaster-affected people are placed does not expose them to disease-causing and nuisance vectors, and those vectors are kept to a reduced level where possible.

Solid waste management methods varied across the camps. In all sites, except Stefanos camp, there were no reports of wastewater drainages. **Table 4.8** above, showed the most common waste disposal methods were “throwing on ground” (5 camps), “burning” (4 camps) and “burying” (2 camps). Absence of water drainage systems and poor solid waste management, with “throwing on ground” as the main disposal method, contradicted the Collection and Disposal standard.

Such improper waste disposal typically increased the likelihood of disease-vector breeding sites, thereby encouraging rodents and other pests. This exposed the IDPs to disease-causing vectors and breached the Vector Control standard.

4.3.2.4 Hygiene promotion implementation

Implementation of health education interventions was the main parameter used to assess the Hygiene Promotion Implementation standard **(Text Box 19)**, and this standard was “unmet”.

Text Box 4.10 – Hygiene promotion implementation standard

Audit Standard 6

WASH - Hygiene Promotion Standard 1: Hygiene Promotion Implementation

Affected men, women and children of all ages are aware of key public health risks and are mobilised to adopt measures to prevent the deterioration in hygienic conditions and to use and maintain the facilities provided.

Distribution and availability of health education and other public health promotion interventions across all the camps were weak. Six health promotion interventions were considered in this audit; namely poverty, WASH, protection, medical aid, health education, and immunisation. **Table 4.9** shows the type of interventions considered and the camps that had reported receiving each intervention.

Table 4.9 – Selected health interventions implemented in camps

Intervention Type	No. of Camps	List of Interventions Implemented
Poverty	2	Bakassi, Durumi
WASH	4	Bakassi, Kuchingoro, Gaida, Stefanos
Protection	2	Bakassi, Stefanos
Medical Aid	6	Bakassi, Durumi, Kuchingoro, Gurku, Stefano, Gullum
Health Education	5	Bakassi, Durumi, Kuchingoro, Kyauta, Stefanos
Vaccination	5	Bakassi, Kyauta, Gurku, Stefano, Gullum

Health education was reported to have been implemented in only five camps. Bakassi camp, in Borno state the main conflict state, was the only site which had received all six interventions. Other camps had received between 1 to 5 interventions, except Mallum camp which reported never having any form of health intervention program.

4.3.3 Shelter, settlement and non-food items

4.3.3.1 Strategic planning

The Strategic Planning standard under the shelter-related sector **(Text Box 20)** was graded “unmet” for various reasons **(Table 4.10)**.

Text Box 4.11 – Strategic planning standard

Audit Standard 7

Shelter and Settlement Standard 1: Strategic Planning

Shelter and settlement strategies contribute to the security, safety, health and wellbeing of both displaced and non-displaced affected populations and promote recovery and reconstruction where possible.

Table 4.10 – Camp shelter types and needs assessment

State	Camp Name	Location	Camp Type	Shelter	Needs Assessment
Borno	Bakassi	Urban	Planned	Tent	Don't know
FCT	Durumi	Rural	Self-settled	- Aluminum sheet - Polyester	Don't know
FCT	Kuchingoro	Rural	Self-settled	- Aluminium sheet - Polyester	Don't know
Kaduna	Kyauta	Urban	Dispersed	Mud and Tent	No
Kano	Gaida	Urban	Dispersed	Concrete building	No
Nasarawa	Gurku	Rural	Planned	Concrete building	Yes
Plateau	Stefanos	Urban	Transit	Concrete building	Yes
Taraba	Mallum	Rural	Dispersed	Thatch	Yes
Taraba	Gullum	Rural	Transit	Concrete building	Yes

The IDPs had settled in different settings and for varied durations. Kyauta camp was an example of a displacement settlement within a host community but still considered a camp-like setting. The transit (temporary) camps, Stefanos and Gullum camps, had been established for about 2 years at the time of this audit. Observed variations, and use of poor materials for

accommodation construction in some locations, such as aluminium sheets, indicated poor planning for IDP shelters.

Responses to needs assessment previously carried out in the camps were also mixed. Four camps specified a needs assessment had been conducted as opposed to two camps where none had been done; whereas, CMs in other camps were uncertain. Combination of the location, long duration of stay in temporary sites and poor assessment awareness showed low compliance with the strategic planning standard.

4.3.3.2 Covered living space

The Covered Living Space standard **(Text Box 21)** which highlights the importance of shelter for displaced people was graded “partially met”.

Text Box 4.12 – Covered living space standard

Audit Standard 8

Shelter and Settlement Standard 3: Covered Living Space

People have sufficient covered living space providing thermal comfort, fresh air and protection from the climate ensuring their privacy, safety and health and enabling essential household and livelihood activities to be undertaken.

All camps visited had shelter available for the IDPs **(see Table 4.10)**. Bakassi camp was the only camp with standard tent shelters, unlike Gurku which although was also planned, used concrete buildings that were previously school facilities. Shelters in the self-settled camps were made of aluminium roofing sheets and polyester bags. Other shelter types mentioned were thatch and mud houses, all of which were not ideal accommodation materials as they offered minimal protection.

4.3.3.3 Distribution approach

The Non-Food Items (NFIs) standard recommends equity in resource allocations **(Text Box 22)**. NFIs include clothing and bedding materials, construction and shelter materials, personal hygiene, eating and cooking utensils, stoves, and fuel. When these items are provided, they are to be distributed fairly and efficiently. In this audit, the standard was considered "partially met".

Text Box 4.13 – Individual, general household and shelter support items standard

Audit Standard 9

Non-Food Items Standard 1: Individual, general household and shelter support items

The affected population has sufficient individual, general household and shelter support items to ensure their health, dignity, safety and well-being.

Age was the most commonly used distribution factor, and two camps also used gender. Camps in the FCT had no distribution system. In Gurku camp, although a distribution system was reported to be used, no specific technique was adopted. Other distribution approaches included household size, malnourishment level and health status **(Table 4.11)**.

Table 4.11 – Camp resource distribution systems

State	Camp Name	Distribution system - Food	Distribution system - Non-Food Items	Distribution system - Medical aid	Distribution system
Borno	Bakassi	Yes	Yes	Yes	Household
FCT	Durumi	No	No	No	Don't know
FCT	Kuchingoro	No	No	No	Don't know
Kaduna	Kyauta	Yes	Yes	No	Age, Family
Kano	Gaida	Yes	Yes	Yes	Age, Gender
Nasarawa	Gurku	Yes	Yes	Yes	Don't know

Plateau	Stefanos	Yes	Yes	Yes	Disease
Taraba	Mullum	Yes	Yes	No	Age, Gender, Malnourishment level
Taraba	Gullum	Yes	Yes	Yes	Household

4.3.4 Health action

The Sphere health action recommendations take into consideration the WHO health systems framework and its six building blocks.[219] Hence, the standards reflect the following components: leadership, human resources, drugs and medical supplies, health financing, health information management and service delivery; and these are all interconnected.

Table 4.12 presents a summary of the healthcare service related information collected.

Table 4.12 – Available camp healthcare resources

State	Camp	Health staff on camp	Type of health staff on camp	Health service post distance	Health service location	Visiting health staff	Basic health commodities available
Borno	Bakassi	Yes	Yes (Nurses, CHWs)	Not far	Camp premises	Yes (Doctors, Nurses)	Basic drugs, Beds, Stethoscope Weighing Scales
FCT	Durumi	Yes	Yes (Nurses, TBAs)	Not far	Camp premises	No	None
FCT	Kuchingoro	Yes	Yes (TBAs)	Not far	Camp premises	Yes (Doctors, Nurses)	Basic drugs Bed
Kaduna	Kyauta	No	No	NA	NA	No	NA
Kano	Gaida	No	No	NA	NA	No	NA
Nasarawa	Gurku	Yes	Yes (TBAs)	Not far	Camp premises	Yes (Doctors)	None
Plateau	Stefanos	No	No	NA	NA	Yes (Doctors, Nurses)	NA
Taraba	Mullum	No	No	Not far	PHC centre	Yes (Nurse)	None
Taraba	Gullum	No	No	Very close	Inside the building	No	None

4.3.4.1 Health service delivery and prioritising health services

The standard on Health Service Delivery **(Text Box 10)** which emphasised the need for effective health services was “partially met”. However, the Prioritizing Health Services standard **(Text Box 11)** was “unmet”.

Text Box 4.14 – Health system standard

Audit Standard 10

Health Action-Health System Standard 1: Health service delivery

People have equal access to effective, safe and quality health services that are standardised and follow accepted protocols and guidelines.

Text Box 4.15 – Prioritizing health services standard

Audit Standard 11

Health Action-Essential Health Services Standard 1: Prioritizing health services

People have access to health services that are prioritized to address the main causes of excess mortality and morbidity.

Except for Bakassi camp, available health services and resources were extremely limited. Four camps had visiting skilled health staff and access to health services in distances within a 5km radius. While camps in Kaduna and Kano states reported having no camp health service, access to emergency centres or external medical staff who visited.

Resident health staff who attended to IDPs in FCT camps were traditional birth attendants (TBAs). TBAs are untrained local health service providers, who within a health system structure, are acceptable for outreach activities at community levels but not for healthcare at a facility level or management of serious health conditions.[13]

Overall, the skilled health personnel and basic health commodities available to IDPs were extremely lacking both on the camp premises and at the health centres.

4.3.4.2 Human resource for health

Healthcare services are advised to be given by trained health personnel who possess appropriate skills, where possible. However, due to the identified poor staffing, numbers and types of available health staff, the Human Resource standard **(Text Box 25)** was “unmet”.

Text Box 4.16 – Human resources standard

Audit Standard 12

Health Action-Health System Standard 2: Human Resources

Health services are provided by trained and competent health work-forces who have an adequate mix of knowledge and skills to meet the health needs of the population.

Some camps had health services available onsite or close to the camp locations within an average of 500m radius. A section of Gullum camp, which was a healthcare facility building, was still partly used to offer health services. Five camps had healthcare staff living within the camp premises or working there daily, while visiting skilled healthcare staff was reported in four camps: Bakassi, Kuchingoro, Gurku and Stefanos camps.

Camps with only TBAs did not qualify as having skilled health staff. Skilled health workers are considered to be those formally trained, such as doctors, nurses, midwives, or pharmacists. The role of each personnel category varied according to their training, which in turn determine the activities they can perform in the health system.[13]

According to the Camp Management Toolkit, the primary role of TBAs in displacement settlements is primarily community outreach.[13] This includes home visits, identification and referral of sick persons and malnourished children, identification of pregnant women, basic health education and data-gathering. While the provision of healthcare services which included consultations, curative care, oral rehydration therapy, dressing of wounds, pharmacy services, simple sterilisation, and facility data collections were the responsibility of trained and skilled healthcare staff.

4.3.4.3 Drugs and medical supplies

Essential medicines and commodities are required consistently to manage morbidity and mortality rates in displacement conditions. However, the standard for Drugs and Medical Supplies **(Text Box 26)** was "unmet".

Text Box 4.17 – Drugs and medical supplies standard

Audit Standard 13

Health Action-Health System Standard 3: Drugs and Medical Supplies

People have access to a consistent supply of essential medicines and consumables.

Only two of the four camps, which had health services on the camp premises, had some basic healthcare resources. This included essential drugs, beds for sick people, stethoscopes, and weighing scales. These resources were considered insufficient for addressing the IDPs primary healthcare needs.[106]

4.3.4.4 Communicable disease prevention and vaccination

The Essential Health Services standards on Communicable Disease Prevention **(Text Box 27)** and Prevention of Vaccine-Preventable Diseases **(Text Box 28)** were both "unmet".

Text Box 4.18 – Communicable disease prevention standard

Audit Standard 14

Health Action-Essential Health Services Standard 1: Communicable Disease Prevention

People have access to information and services that are designed to prevent the communicable diseases that contribute most significantly to excess morbidity and mortality.

Text Box 4.19 – Prevention of vaccine-preventable diseases standard

Audit Standard 15

Health Action-Essential Health Services Child Health Standard 1: Prevention of Vaccine- Preventable Diseases

Children aged 6 months to 15 years have immunity against measles and access to routine Expanded Programme on Immunisation (EPI) services once the situation is stabilised.

Key actions required to prevent communicable diseases include implementation of disease prevention measures, and appropriate vector and vector-borne disease control.[33] Based on the interventions considered in **Table 4.9**, gaps in hygiene promotion implementation showed the provision of knowledge required for communicable disease prevention was lacking. Poor hygiene practices, especially open defecation, throwing of wastes on the ground and absence of drainage systems emphasised the lack of disease prevention practices.

Poor vaccination coverage was also observed under the health intervention assessment **(Table 4.9)**. Only five camps reported some vaccination activities had been conducted for the IDPs. Identified weakness in vaccination

distribution resulted in failure to achieve audit standard 15, which focused on prevention of vaccine-preventable diseases.

4.3.5 Distribution of findings by location

Attainment of the standards by camp locations as shown in **Table 4.13** revealed that the camp in the main crisis state (Borno, North-East) was planned, and had more resources, whereas those further away were mostly self-settled. Also, camps further away from the crisis state had less access to resources. In addition, the Borno state camp had the highest number of standards met when compared to camps in Kaduna and the FCT which were the furthest locations. Review of each camp by sectors showed attainments were mostly “Partially met” or “Unmet” in over 70% of camps.

Table 4.13 – Audit standard attainment by camp location and sector

Zone	State	Camp Name	Camp Type	Location Sector Overall Score (15)								
				Met			Partially Met			Unmet		
North-West	Kano	Gaida	Dispersed	5			3			7		
North-West	Kaduna	Kyauta	Dispersed	0			4			11		
North-East	Taraba	Mullum	Dispersed	0			4			11		
North-East	Borno	Bakassi	Planned	11			3			1		
North-Central	Nasarawa	Gurku	Planned	4			10			1		
North-Central	FCT	Durumi	Self-settled	3			3			9		
North-Central	FCT	Kuchingoro	Self-settled	3			3			9		
North-East	Taraba	Gullum	Transit	2			7			6		
North-Central	Plateau	Stefanos Foundation	Transit	8			6			1		
Sector Attained Scores (135)				37			42			56		
Total Score Attainable by Sector Wash (54), Shelter (27), Health (54)				WASH	Shelter	Health	WASH	Shelter	Health	WASH	Shelter	Health
				10 (20.4%)	9 (33.3%)	17 (31.5%)	23 (40.7%)	7 (25.9%)	13 (24.1%)	21 (38.9%)	11 (40.7%)	24 (44.4%)

4.4 Discussion

4.4.1 Main findings

The audit study aimed to assess the camp conditions and health-related resources available to IDPs in camp-like settings in Nigeria; and whether these met international minimum standards. This is the first audit to assess living conditions and resources across different IDP settlements. Observations showed significant disparities between living situations and the recommended Sphere minimum standards. None of the 15 standards assessed was fully "met", five were "partially met" and the other ten were "unmet" (WASH: 4 of 6, shelter: 1 of 3 and health: 5 of 6 standards). Environmental and healthcare service-related standards were the weakest domains. Therefore overcrowding, poor sanitation, and limited access to healthcare were common characteristics across the camps.

Observations indicated wide gaps existed in the resources and services provided; and also, camp types and locations influenced these disparities. Health programme implementation was especially poor in self-settled and dispersed settlements. As such, IDPs not within the conflict region or under the administration of an external organisation had more limited access to basic resources. Observed inequalities in resource distribution indicated high vulnerability to and risk of air, water, and food-related diseases.

4.4.2 WASH

The four "unmet" WASH standards were related to personal and environmental factors such as waste disposal and hygiene. This implied IDPs had a personal role to play in the observed camp conditions. Considering essential skills for good sanitation and hygiene are mostly derived from health

education programs; since the hygiene standard was “unmet”, camps with no health education interventions were at a disadvantage. Previous assessments conducted in the region, at the same time period as this research audit, also identified similar associations.[220–223] These reports showed that IDP camps with no health education had poorer living environments and practised unsafe hygiene habits when handling food and water. These assessments were, however conducted in IDP locations in Borno state alone. This is because as at the time of this research, the vast majority of assessments focused only on the north-east region. Consequently, most field reports from 2016 were not true representations of all conflict-affected IDPs in the country.

Water sources categorised as “far away” were likely inaccessible to vulnerable groups, especially the elderly and disabled. Inaccessibility increased deprivation, health risks and also had economic implications.[176,224] For example, a previous assessment reported that in an area where the nearest water point was 3km away from IDP locations in Borno state, the only water seller (water vendor) in that location charged double the typical cost.[224] Such cost implications may have influenced the IDPs water sourcing prioritisation, for example, encouraging the use of open water wells and rivers for drinking purposes. Such alternatives were prone to high microbial contamination and had several health implications.[225,226] Despite these likely implications, related evidence on the association between type of water sources used by displaced populations and the impact on their health are still limited.

Similar to this audit, lack of water drainage and poor solid waste management were detected in other field assessments.[222,227–230] Reported predominant use of open defecation and inappropriate excreta disposal practices were often

attributed to the insufficient number of toilet facilities in IDP settlements.[99,222] A previous assessment revealed that most camps had no toilet facilities and in a specific camp, one toilet served an average of 761 IDPs per day with a waiting time of at least 10 minutes, while another camp had two toilet facilities for 5,000 IDPs with a waiting time of 40 minutes.[222] To avoid long waits, most IDPs in the assessments were reported to resort to open defecation, especially children, since most toilets were for adults only. Similar challenges may have influenced the camps visited in this research, considering not all sites had access to nearby toilets, and the majority practised outdoor defecation.

Open defecation habits in conjunction with poor handwashing increased the risk of food and water contamination, as well as related communicable diseases.[231,232] This is shown in the matched case-control epidemiologic investigation by Swerdlow et al., where open defecation near water sources resulted in higher cholera incidence among refugees who drank water sourced from rivers and put their hands in water containers.[232] Identified open defecation in this study and similar health risks from water contamination, therefore, reveals the need for increased health action, which includes the provision of more WASH facilities.

4.4.3 Shelter

Quality of shelters was generally poor and most concrete buildings used were structures originally built for other purposes, such as schools. Extended use of these public facilities disrupted their primary functions and impacted the lifestyles of both IDPs and non-IDP communities.[18,81] Hence, it is likely both

groups were unable to access services provided in such facilities, partly or in full, and this further affected their health and wellbeing.

Geographic spread of shelters is a significant factor for IDP protection. Hence, the wide settlement dispersion observed in a settlement like Gaida camp with a small number of IDPs spread across a 5km radius; could impact security, cultural activities and use of resources, for example, latrines and water points.[176] Evidence from different regions show security incidences often disrupted intervention provision, for instance, food distribution; and this has been pointed as one reason why most IDPs had a higher preference for living outside camp-like settings.[233] As such, similar factors may be related to why the majority of IDPs in Nigeria preferred to live in host communities as reported in the DTM reports.[68] Furthermore, observed dispersion of settlements in the audit likely contributed to the CMs' poor knowledge of the estimated household numbers.

Average household size between six and 21 persons, as shown in the study, signified overcrowding. Previous assessments also revealed some shelters housed two or more families.[234,235] This finding reflected the Nigerian demographic household estimations, which indicated that the average household size at a national level was five, but sometimes up to nine or more in rural areas.[87] Thus, two families living in one accommodation suggested some shelters housed 18 or more people. Overcrowding among IDPs, however, could be related to the identified poor strategic planning, lack of needs assessment and limited supportive interventions.[220,236] These household overcrowding had significant health effects; and other implications

reported included deprivation of privacy, especially among women and girls, as evident in the 2016 Nigerian HNO report.[237]

A combination of poor shelter, location, and overcrowding posed major risks for contracting infectious diseases such as meningitis and measles. Outbreaks of measles in some IDP camps in the country have been partly attributed to overcrowding.[90,238] Furthermore, as all camps audited had been in existence for about 1 to 4 years, extended health implications from poor living conditions could result in several disease infections and outbreaks.[97,239] This is because the longer a camp existed, the less attention and support were provided for health promotion and protection activities.[178,240]

4.4.4 Health

Health service standards had the weakest attainment, with 5 of 6 being "unmet". Lack of appropriate healthcare services and limited access to health centres pointed to extremely poor health service availability. Previous reports highlighted health and medical commodities were common needs among IDPs in camp-like settings.[221,222,230,241] An assessment of health facilities in five areas in Borno state discovered only 86% of assessed facilities were functional (48 of 56) and these provided services to about 1.3 million IDPs.[241] The same assessment reported most services provided in those facilities were "unsatisfactory", and these included poor infrastructure, cold chain system, standard care protocol, laboratory, and case referral.[241] Another assessment specified that in Borno state, the closest facility for IDP referral care was sometimes located in a neighbouring country, Niger Republic.[230] This presented further complications, which included migration, political disputes and lack of adequate documentation. For instance, Burkle et al. reported a

limitation in assessing emergency surgery information in the Syrian humanitarian crisis was the lack of routinely collected patient referral data.[242] This evidence indicated the identified gaps in health services available for IDPs, including poor monitoring, as shown in this audit, were unfortunately quite common.

Observed shortage of qualified health workers in IDP camps increased the use of local health providers like TBAs. While TBAs play a vital role in displacement situations, engaging them as primary contacts for management of all health issues was a risk. Bucher et al. revealed most TBAs used inappropriate or outdated practices when conducting child deliveries.[243] The study, however, was not based on displaced populations, but since it reflected a rural sub-Saharan African country (Kenya), the findings were likely applicable to the IDP scenario in this research.[243] As such, camps with only TBAs did not qualify as having skilled healthcare staff.

Healthcare gaps identified encouraged poor disease management which could result in late presentation of chronic conditions, complications and outbreaks to skilled health staff.[34,243] Delayed outbreak awareness has been associated with higher mortality among IDPs compared to refugees or non-IDP populations. Heudtlass et al. reported that observed lower death rate among refugees was associated with better accessibility to resources provided by international aid agencies.[36] The study, however, stated mortality rates could have been over- or underestimated due to reasons unrelated to displacement status. Nonetheless, the limitations pointed out the impact of weak healthcare management procedures used for IDP. Unfortunately, as international organisations did not directly manage IDPs, they experienced

greater accessibility challenges,[34] and therefore more vulnerable to poorer health outcomes. Thus, the absence of disease management and failure to meet the disease prevention standard in the audit displayed a critical weakness in IDP health protection.

Overall, previous studies support the findings in this research and show general poor adherence to essential healthcare recommendations.[223,244,245] Other WASH and shelter-related studies revealed limited access to services, especially in camps not formally recognised, was commonly associated with poor health and wellbeing.[223,245] Also, the review by Porter and Haslam showed that IDPs living in institutional and temporary accommodations, such as transit camps, experienced restricted opportunities and had worse health outcomes.[244] This review however focused specifically on mental health studies conducted prior to 2003, so reliability of the findings may be uncertain in the current time period. Nevertheless, results from this audit support the review finding as showed that camp types, location, size, residential spread, and management approach appeared to influence IDP living conditions.

4.5 Strengths and limitations

Information collected in this audit were based on self-reports and observation of current living conditions. Hence, validity was affected since the study did not capture the complete IDP resource accessibility history since first arrival at the camps, but rather showed only one point in time. Although the audit questions were simplified, some CMs were unable to fully answer a few questions, especially in camps managed by IDP leaders. Response bias may also have been introduced as some answers were based on personal perceptions and not likely reflective of all IDP camp residents. Furthermore,

direct observations of resources were not possible in some locations due to insecurity and time constraints, thus affecting the reliability of the study.

Despite these limitations, as this is one of the first assessment carried out on multiple IDP sites and types, the researcher believes the data reported adds important information to the current knowledge on IDP resource distribution and its related impact. The findings are particularly important within the current global context and for countries with high volumes of IDPs in different settings.

4.6 Conclusions

The audit study revealed the poor living conditions and uneven distribution of resources among IDPs in Nigeria. It also identified several gaps when compared to the international minimum standards, particularly those related to healthcare. Comparison by states showed that IDPs who moved further away from the conflict region had little or no access to needed resources. Inaccessibility to health-related resources, including adequate sanitation, hygiene, and shelter; increased the risk of air, water and food-related diseases such as respiratory infections, malaria and diarrhoea. Consequently, quality of life among IDPs, especially those further away and in informal camps, were likely affected by these resource shortages.

5 ASSESSMENT OF IDP RESOURCE UTILIZATION AND HEALTH OUTCOMES (QUANTITATIVE STUDY)

5.1 Introduction

A major consequence of forced human displacement is higher disease burden. Multiple infectious disease outbreaks like diarrhoea, pneumonia, and measles are also common in these settings.[33] In addition, NCDs such as heart conditions and diabetes are becoming major challenges as well.[246] This is because disaster emergencies increase the risk of NCD-related complications, for example, a person with high blood pressure developing a heart attack.[246,247] Despite this, and the fact NCDs are currently the leading causes of death and disability worldwide, the impact on displaced populations are generally unknown.[246,247]

Settlement in camp settings increase susceptibility to infectious diseases due to poor living conditions, nutrition, and access to proper healthcare resources.[33,248,249] In less-developed countries like Nigeria, the combined effects from these factors can significantly increase mortality rates.[1,42,46] Understanding the disease burden among IDPs is, therefore essential and would help identify priority areas for immediate action when planning humanitarian support.

This chapter presents the findings from a cross-sectional survey of IDPs. The study assessed their health outcomes and resource utilisation, in relation to the associated risk factors. Also, the involvement and responsibilities of IDPs in camp and vaccination management were explored.

5.2 Methods

5.2.1 Survey sampling

All IDP age groups and genders living in the camps were included in the study. However, children under 18-years were interviewed with an adult present. Based on the sample size calculation for a cross-sectional study with the requirements for a 2.5% margin for error and 95% confidence interval, the estimated sample size needed was 1531.[250] Various other assumptions including recommendations from the WHO vaccination coverage survey calculation,[251] were also considered.

To increase generalisability of the findings and ensure a purposeful spread of the sample population, 0.5% of the IDPs in each selected state was sampled (n = 2030). A contingency of 10% was also factored in to allow for the likelihood of attrition due to incomplete or missing data. The final survey sample was, therefore aimed at 2,234 **(Table 5.1).**

Table 5.1 – Distribution of IDP population living in camps in the selected states as of December 2015

No	Geopolitical zone	State	Number of IDPs living in camps (based on proportions per state)[203]	Study population (0.5% of IDPs in camp settings)
1.	North-East	Borno	34,317.8	171.59
2.	North-Central	FCT	220,829.4	1104.15
3.	North-West	Kaduna	23,324.4	116.62
4.	North-West	Kano	4,472.6	22.36
5.	North-Central	Nassarawa	33,690.8	168.45
6.	North-Central	Plateau	44,809.6	224.05
7.	North-East	Taraba	44,642.4	223.21
Total			406,087.00	2030.44
			10% contingency	203.04
			Total estimated study sample	**2233.48**

5.2.1.1 Field Survey Sampling Approach

Population sampling at the household level was conducted using the 30-cluster survey sampling approach. This is the most commonly used technique for assessing immunisation coverage especially for locations with scattered household distributions, and no available household lists.[252] The method uses a probability proportion determined by three variables: the population under consideration (p), number of geographic clusters (m) and number of individuals (n) per cluster. The mathematical formula is shown below:

$$(m) \times (n) = (p)$$

In EPI surveys, the general target population is systematically divided into 30 clusters *(m)*, then seven or more participants *(n)* are sampled from each cluster. To estimate the immunisation coverage in a particular area, the sample population *(p)* used is usually about $p = 210$ (i.e. 30 x 7 = 210).

The WHO vaccination coverage manual encourages adaption of this sampling approach.[251] Hence, for this research, the sampling variables were applied in a different order.

Since the camp populations were small, each location was split into six clusters ($m = 6$), matching the number of field workers (6 field workers per team). The estimated sample population for each camp (p) was then divided by the number of clusters (m) to determine the number of participants (n) required per cluster. Fractions were taken into considerations and rounded up to the next whole number. As an example, the sample size calculation for Kaduna state is shown below:

$$\text{Estimate state IDP sample, } p = 117$$
$$\text{Number of clusters, } m = 6$$
$$\text{Sample per cluster, } n = (117/6) = 19.5 \approx 20 \text{ IDP}$$

Final sample, (m x n) = 6 x 20 = 120 IDPs

Households in the context of this research included everyone living under the same residential unit. In each cluster, after identification of the first household, subsequent odd-numbered households were selected until the quota for the cluster was attained. The average household size in Nigeria is five persons, and this was used as the maximum sample per household. Where applicable, individuals in each household were selected to represent different age groups and/or sex (elderly i.e. 70 years and above, adult male, adult female, under-18s and under-5s).

5.2.2 Survey questionnaire

The survey tool was adapted from the MSF Refugee Health Guidelines,[17] the UNHCR Food Distribution Monitoring Checklist, [253] and Nigeria EPI vaccine schedule.[254]The tool was designed to collect data on demographics, living conditions, health and community involvement information.

Text Box 5.1 – Refugee Health Guidelines

Refugee Health Guidelines
Guideline on top priority health requirements in emergency situations and can serve as checklist during field operations in both emergency and post-emergency phase of a humanitarian crisis.

Text Box 5.2 – UNHCR Food Distribution Checklist

Food Distribution Checklist
Outlines key areas of food distribution to be assessed. This include the sources of food, physical organisation of food distribution areas, distribution processes and beneficiary details.

Text Box 5.3 – Nigeria National Expanded Immunisation Program

Nigeria Expanded Immunisation Program
Presents the list of recommended vaccines and administration schedule. This included vaccines against tuberculosis, polio, hepatitis, diphtheria, pertussis, tetanus, yellow fever, measles, mumps, rubella, pneumonia and rotavirus

Questions were customized and simplified for easy understanding by the IDPs. Questions relevant to a specific group were skipped when applicable. For example, questions related to pregnancy and breastfeeding were only administered to women of child-bearing age and nursing mothers, respectively **(Appendix 5.1)**.

The questionnaire had four main sections: basic bio-data, living condition in the camps, health history, and vaccination information. The basic bio-data and living condition sections captured individual IDP personal demographic data. The second section collected information on the current environmental and living conditions including the sources of water, food, type of toilets and hygiene practices. The health history section asked questions on illnesses that had occurred while in the camps, health services, and female-specific questions. While the final section focused on vaccination information, perception, and management, including general camp management.

5.2.3 Survey data collection

Household selection for the survey was done by odd-numbered houses in each cluster. The teams moved in pairs and ensured adequate gender balance. In cases where the interviewers were allowed into the households, female interviewers were responsible for speaking with the female IDPs. The interviews were conducted in open spaces and dark, secluded or hidden areas were avoided for security purposes.

During the first visit, if any of the five individuals to be sampled per household were absent, a second visit was made the next day. If participants were still unavailable during the second attempt but were nearby like in a farm or market, the interviewers visited that location to conduct the survey. If still

unavailable on the second day, the person was replaced with someone else meeting the same criteria in the next household, i.e. from among the even-numbered households.

The 30-cluster survey approach was not always attainable in some camps. This was because the majority of the camp population clustered together in communal open spaces during the day time. In such cases, a pragmatic approach was adopted to identify individuals from the same households. The survey was conducted either in English or Hausa languages.

5.2.3.1 Statistical Analysis

The primary outcome measured for this study was “ever fallen sick”. This referred only to conditions that occurred in the current camp. Distinctions were made between the “current camp” (i.e. camp where the survey took place) and “previous camp” (i.e. last camp location before arrival on the current camp). Sickness in the context of this question was defined as “acute conditions” that were initiated while an individual was in a camp, e.g. malaria and cough. Information on persisting health conditions (e.g. high blood pressure and diabetes) experienced before or after arrival at the camps were captured under “long-term illnesses”. Multiple illnesses given for both acute and persisting conditions were split into the appropriate category. Household mortality information was collected from each respondent, but during the analysis, only one response per household (the response with the highest reported mortality) was considered. All information used in the study was based on IDP self-reports only.

Risk factors (i.e. exposure variables) associated with IDPs falling sick were those related to all four Sphere sectors: WASH, food, shelter, and healthcare.

Responses to the type of resources utilised were used to explore how they contributed to the IDPs developing specific health conditions. Risk factors assessed were: drinking water source, water storage methods, hand washing practices, toilet types, the distance between toilets used and drinking water sources, problems with rodents and disease vectors, daily feeding frequency, shelter types, and household size. Potential confounders considered were camp location, age, gender, religion, vaccination status, education, long-term illnesses and duration of stay at the camp.

Missing data were included in the analyses as a dummy variable category. Responses recorded as “don’t know’” or “not applicable” were also reported as separate categories. Maternal health variables were analysed for females over 5-years old. Although female reproductive age is generally defined as being between 15-49 years,[255] considering early marriages were common in the study region, and some marriages occurred before teenage years,[256] all females in the 5-17 years age group (as captured in the sampling protocol) were included in the analysis. A similar cut-off was used in the study by Hynes et al. which assessed reproductive health indicators and outcomes among displaced populations.[178] This approach reflected the WHO statement that girls under 15 years of age were often added to the reproductive age group.[255]

Factors related to pregnancy, childbirth and baby vaccination were analysed for only those who reported either being currently pregnant and/or had delivered a child while in the camp. Likewise, vaccination uptake was analysed for the entire study sample, but where available, immunisation information on vaccination cards presented was used to validate responses for those who reported ever being vaccinated. Changes in attitudes to

vaccination and involvement in camp management following the experience of living as IDPs were also investigated.

Descriptive analyses were performed to explore the distribution of variable results, and these were expressed as percentages. Outcomes were also stratified by camps and used to analyse possible associations between location and health status. To analyse the association between exposures and outcomes, logistic regressions were conducted to identify possible relationships between the two groups.

Crude and multivariable logistic regressions were conducted with two multivariable models developed. **Model A** included all risk factors and confounding variables together, and **Model B** only included risk factors and confounders that were significantly associated (*p-value*=<0.05) with the outcome after running **Model A**. A stepwise backward selection approach was used, where after the first modelling step in **Model A**, non-significant variables were removed until all variables in the model had a p-value of less than or equal to 0.05. The results presented showed both crude and adjusted odds ratios (aOR) as well as the 95% confidence intervals (CI). All analyses were undertaken using Stata 15.0 statistical software.

5.3 Results

The target sample was 0.05% of IDPs in the selected states. After including several contingencies to allow for missing and inconsistent data, a total of 2,253 IDPs from 781 households were selected for the study **(Table 5.2)**. Although, the achieved number exceeded the sample goal indicating over 100% completion rate, about 24% of IDPs in Kaduna state (30 IDPs) refused to participate; also insecurity in Borno state did not allow data collection after

two days in the field. Hence, sample sizes in these states were smaller than intended.

The majority of respondents were from the FCT camps (Durumi 30.1% and Kuchingoro 23.9%) which had the highest proportion of IDPs settled in camp-like settings as shown in the DTM report used to design this research. To even out the North-West zonal IDP representation after the shortfall in Kaduna state, the sample size in Kano state was increased from 23 to 68 IDPs.

Table 5.2 – Research survey sample size: Target and actual numbers attained

Zone	State	Camp	Camp Type	Intended survey sample (n=2,034)	Actual surveys conducted (n=2,253)	% (95% CI)	Number of households
North-East	Borno	Bakassi	Planned	172	149	6.6 (5.6– 7.7)	50
North-Central	FCT	Durumi	Self-settled	1105	678	30.1 (28.2 –32.0)	211
North-Central	FCT	Kuchingoro	Self-settled		538	23.9 (22.1 –25.7)	164
North-West	Kaduna	Kyauta	Dispersed	117	91	4.0 (3.3 – 4.9)	36
North-West	Kano	Gaida	Dispersed	23	68	3.0 (2.4 – 3.8)	32
North-Central	Nasarawa	Gurku	Planned	169	240	10.7 (9.4 – 12.0)	103
North-Central	Plateau	Stefanos	Transit	225	229	10.2 (8.9 – 11.5)	90
North-East	Taraba	Mullum	Dispersed	223	155	6.89 (5.9 – 8.0)	55
North-East	Taraba	Gullum	Transit		105	4.7 (3.8 – 5.6)	40

5.3.1 Survey participant characteristics

Male/female sex ratio indicated equal distribution at 0.97 (1,112/1,141), while the overall mean age was 20.3 years (SD=0.5; range=0 to 88 years old). There were 381 children under-5 (16.9%) and 679 in the 5 to17 age group (30.1%). Those aged 70 years and above had the lowest proportion at 0.9% (20 IDPs). The pyramid in **Figure 5.1** shows the symmetry between the two sexes across all age groups.

Figure 5.1 – Age distribution of surveyed IDP population

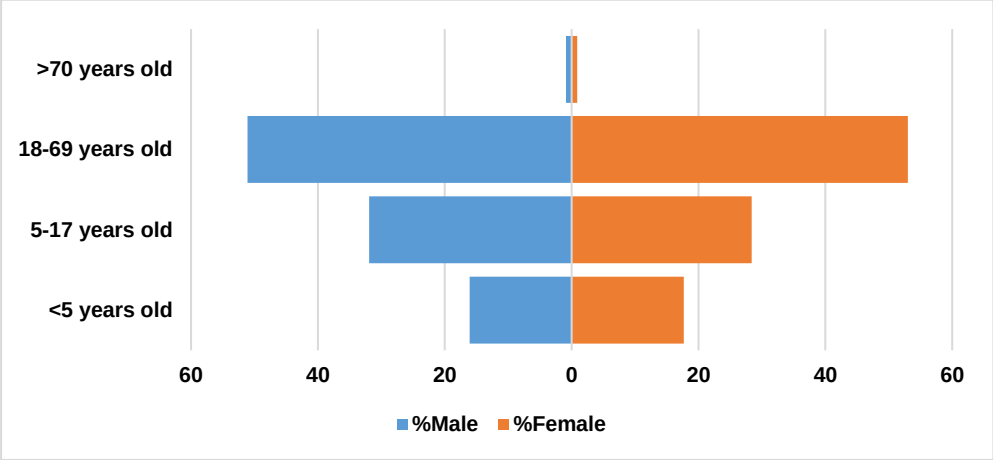


Table 5.3 describes the demographic characteristics of the sampled IDPs. Over half of the population was either single, widowed, or divorced, while 40.7% were married. Over a third had no formal education (42.3%) and the majority had only basic education (51.5%). Basic education represented IDPs who had received formal education up to primary school levels.

The proportion of Christians was slightly more than the Muslims (56.6% to 43.3%), while the most common languages spoken by about 71.9% did not include the two main languages used in the Northern region (Hausa and Fulani). Languages spoken were mostly unique to the sub-regional local tribes where the IDPs came from, as shown in the audit **(see section 4.3)**. About a third of the IDPs aged five and above reported having a job (31.0%). Among those employed, the most common jobs were farming (25.5%), trading (12.8%) and transportation (11.6%).

Table 5.3 – Sociodemographic characteristics of survey participants

Sociodemographic characteristics (n=2,253)		n	% (95% CI)
Gender	Male	1,112	49.4 (47.3 - 51.4)
	Female	1,141	50.6 (48.6 - 52.7)
Age	<5 years	381	16.9 (15.4 - 18.5)
	5-17 years old	679	30.1 (28.3 - 32.1)
	18-69 years old	1,173	52.1 (50.0 - 54.1)
	>70 years old	20	0.9 (0.6 - 1.4)
Marital Status	Single	1,284	57.0 (54.9 - 59.0)
	Married	917	40.7 (38.7 - 42.8)
	Divorced	5	0.2 (0.1 - 0.5)
	Widowed	47	2.1 (1.6 - 2.8)
Education	None	954	42.3 (40.3 - 44.4)
	Basic	1,161	51.5 (49.5 - 53.6)
	Secondary and above	136	6.0 (5.1 - 7.1)
	Missing	2	0.1 (0.0 - 0.3)
Religion	Christian	1,276	56.6 (54.6 - 58.7)
	Muslim	975	43.3 (41.2 - 45.3)
	Missing	2	0.1 (0.0 - 0.3)
Main Language Spoken	Hausa	592	26.3 (24.5 - 28.1)
	Fulani	36	1.6 (1.1 - 2.2)
	Others	1,619	71.9 (70.0 - 73.7)
	Missing	6	0.3 (0.1 - 0.6)
Employment among >5 years olds (n=1,872)	Yes	587	26.1 (24.3 - 27.9)
	No	1,589	70.5 (68.6 - 72.4)
	Missing	77	3.4 (2.7 - 4.3)
Employment Types (n=587)	Carpenter	16	2.7 (1.6 - 4.4)
	Civil servant	4	0.7 (0.2 - 1.7)
	Construction worker	13	2.2 (1.2 - 3.8)
	Farmer	144	24.5 (21.1 - 28.02)
	Motor mechanic	13	2.2 (1.2 - 3.8)
	Tailor	34	5.8 (4.0 - 8.0)
	Teacher	12	2.0 (1.1 - 3.5)
	Trader	75	12.8 (10.2 - 15.8)
	Traditional doctor	6	1.0 (0.4 - 2.2)
	Transportation	68	11.6 (9.1 - 14.5)
	Weaver	19	3.2 (2.0 - 5.0)
	Others	57	9.7 (7.4 - 12.4)
	Missing	126	21.5 (18.2 - 25.0)

5.3.2 Displacement history of participants

About 78.3% of the sample population had originally been displaced from Borno state and 8.7% from Adamawa state **(Table 5.4)**. Some IDPs had also been displaced from other locations where the Boko Haram conflict had been less intense, such as Kaduna and Plateau states. This implied that smaller-scale conflicts or other unrelated conflicts might have occurred in those areas, but the affected populations had congregated in the same camp locations.

Nearly a third of the IDPs (27.6%) had lived in previous IDP displacement locations before the current survey sites. Most had stayed in Kaduna (34.7%),

Borno (29.9%) and Kano (16.1%) states. The high proportion that moved out from Kaduna state could explain the reduction in anticipated IDP numbers. Missing data for the location of resident before displacement were mostly from children born in the camps. Overall, the IDPs had stayed in the study camps between 1 to 5 years, and the average length of stay was 2.3 years.

Table 5.4 – IDP previous locations and duration of stay in the current camp

Displacement Information (n=2,253)		**n**	**% (95% CI)**
Resident location before displacement (States)	Borno	1,763	78.3 (76.5 - 79.9)
	FCT	2	0.1 (0.0 - 0.3)
	Kaduna	3	0.1 (0.0 - 0.4)
	Nasarawa	2	0.1 (0.0 - 0.3)
	Plateau	141	6.3 (5.3 - 7.3)
	Taraba	3	0.13 (0.04 - 0.41)
	Adamawa	195	8.7 (7.5 - 9.9)
	Yobe	3	0.1 (0.0 - 0.4)
	Benue	10	0.4 (0.2 - 0.8)
	Gombe	5	0.2 (0.1 - 0.5)
	Cameroun	6	0.3 (0.1 -0.6)
	Missing	120	5.3 (4.5 - 6.3)
Previously stayed on an IDP camp	Yes	622	27.6 (25.8 - 29.5)
	No	1,438	63.8 (61.8 - 65.8)
	Missing	193	8.6 (7.5 - 9.8)
Location of IDPs who stayed in previous IDP locations (n=622)	Borno	186	29.9 (26.4 - 33.6)
	FCT	1	0.2 (0.0 - 1.1)
	Kaduna	216	34.7 (31.0 - 38.6)
	Kano	100	16.1 (13.3 - 19.2)
	Nasarawa	1	0.2 (0.0 - 1.1)
	Plateau	22	3.5 (2.2 - 5.3)
	Taraba	3	0.5 (0.1 - 1.4)
	Adamawa	1	0.2 (0.0 - 1.1)
	Yobe	1	0.2 (0.0 - 1.1)
	Benue	9	1.4 (0.7 - 2.7)
	Gombe	33	5.3 (3.79- 7.4)
	Missing	49	7.9 (5.9 - 10.3)
	NA	1,631	NA
Length of stay in current IDP camp	<1 year	238	10.6 (9.3 - 11.9)
	1 year	286	12.7 (11.4 - 14.1)
	2 years	1,176	52.2 (50.1 - 54.3)
	3 years	401	17.8 (16.3 - 19.4)
	4 years	34	1.5 (1.1 - 2.1)
	5 years and above	11	0.5 (0.3 - 0.9)
	Don't know	106	4.7 (3.9 - 5.7)
	Missing	1	0.0 (0.0 - 0.3)
Average duration time on each camp (years)			
	Bakassi	0.82	
	Durumi	1.78	
	Kuchingoro	1.83	
	Kyauta	1.96	
	Gaida	1.78	
	Gurku	1.89	
	Stefanos	2.54	
	Gullum	1.99	
	Mallum	2.18	

As indicated in the audit, it is worth noting that while transit camps are generally intended for short periods only, the average stay in both transit locations (Stefanos and Gullum camps) was two years. **(See Section 4.2)**

5.3.3 Available non-medical resources

5.3.3.1 Shelter

Table 5.5 shows over 50% of IDPs lived under tents, 15.7% in mud houses and 6.4% in shelters made with thatch. Some pre-existing concrete buildings converted to IDPs shelters accounted for 16.6 %. While a small proportion lived in shelters made from aluminium roofing sheet (0.4%). Data on shelter types were not given by 63 (2.8%) of participants, and this was recorded as missing. Consequently, it cannot be concluded all IDPs had sheltered accommodation.

Household numbers ranged from 1 to 32 persons, with an average of 6.73 persons per household. This varied from 5.71 to 9.58 in Kuchingoro and Bakassi camps, respectively.

Table 5.5 – Types of shelters used by IDPs and the average household sizes

Shelter resource and distribution (n=2,253)		**n**	**% (95% CI)**
Type of shelter	Aluminium sheet	9	0.4 (0.2 - 0.8)
	Concrete building	373	16.6 (15.0 - 18.2)
	Mud	353	15.7 (14.2 - 17.2)
	Tent	1,311	58.2 (56.1 - 60.2)
	Thatch	144	6.4 (5.4 - 7.5)
	Missing	63	2.8 (2.2 - 3.6)
Average Household size	<5 persons	1,043	46.3 (44.2 - 48.4)
	5-10 persons	375	17.0 (15.2 - 18.2)
	>10 persons	169	7.5 (6.5 - 8.7)
	Missing	666	29.6 (27.7 - 31.5)
Average Household size by camp (=IDPs/household)			
	Bakassi	9.58	
	Durumi	6.04	
	Kuchingoro	5.71	
	Kyauta	8.77	
	Gaida	9.53	
	Gurku	7.33	
	Stefanos	6.20	
	Gullum	6.54	
	Mallum	5.79	

5.3.3.2 Drinking water and food

Main sources of water were boreholes (72.6%), but about 0.1% had no direct access to drinking water **(Table 5.6)**. Another common source was purchasing from street water vendors (7.2%). Some IDPs also got their water from open sources vulnerable to high contamination like wells (15.6%) and rivers (1.9%).

All locations showed signs of food shortages by the low feeding frequency and dependency on supply from outside sources. Most IDPs ate twice daily, but nutritional content was unknown and beyond the scope of this research. Hence, dietary impact could not be assumed. Most of those who ate/fed three or more times were babies being breastfed. The most common means of obtaining food was by self-purchase. IDPs purchased either raw food from the market to prepare personally or already cooked meals from food vendors. About 11% got their food directly from farmlands, while 1.5% relied primarily on donations.

Table 5.6 – IDP sources of drinking water and food, and daily feeding frequencies

Food and drinking water resources (n=2,253)		**n**	**% (95% CI)**
Source of Drinking Water	Borehole	1,636	72.6 (70.8 - 74.5)
	None	3	0.1 (0.0 - 0.4)
	Public stand post	50	2.2 (1.7 - 2.9)
	Rain	3	0.1 (0.0 - 0.4)
	River	43	1.9 (1.4 - 2.6)
	Street vendor	161	7.1 (6.1 - 8.3)
	Water tank	5	0.2 (0.1 - 0.5)
	Well	351	15.6 (14.1 - 17.2)
	Missing	1	<0.1 (0.0 - 0.2)
Main sources of food	Donations	34	1.5 (1.1 - 2.1)
	Purchase (Food vendors)	90	4.0 (3.2 - 4.9)
	Purchase (Market)	959	42.6 (40.5 - 44.7)
	Farm	242	10.7 (9.5 - 12.1)
	Others	60	2.7 (2.0 - 3.4)
Average daily food intake	1 meal	180	8.0 (6.9 - 9.2)
	2 meals	1,211	53.8 (51.7 - 55.8)
	3 or more meals	862	38.3 (36.2- 40.3)

5.3.3.3 Sanitation and Hygiene

Similar to the camp audit findings **(see Section 4.3.1),** poor sanitation and hygiene practices were evident at the individual IDP level, as shown in **Table 5.7.** About 1,035 IDPs (45.9%) practiced outdoor defecation and 884 (39.2%) used pit toilets. Mobile and water closet toilets were not very common (2.8% and 9.8% respectively) and were available only to IDPs in the FCT, Stefanos and Gurku camps, all of which were in the north-central zone. Distance between the toilets used and the main sources of drinking water was either very close (35%) or not too far away (42.7%). This posed cross-contamination concerns from outdoor toilet facilities, especially during cooking.

Communal heaping as a rubbish disposal method was used by 71.6%, although often these were eventually burnt (7.3%). About 17.4% reported throwing wastes anywhere on the camp grounds, thus littering the environment. Observed waste disposal practices could likely be linked with the high volume of rodents and disease vectors reported (97.7%). The most common vectors were rats (75.3%), mosquitoes (52.4%) and flies (17.4%) which breed in dirty environments and stagnant waters.

Table 5.7 – IDP environmental and sanitation practices and experience

Environmental resource (n=2,253)		**n**	**% (95% CI)**
Type of toilets used	Mobile toilet	64	2.8 (2.2 - 3.6)
	Outdoor/Bush	1,035	45.9 (43.9 - 48.0)
	Pit	884	39.2 (37.2 - 41.3)
	Water closet	221	9.8 (8.6 - 11.1)
	Others	43	1.9 (1.4 - 2.6)
	Missing	6	0.3 (0.1 - 0.6)
Distance between toilet and drinking water	Not too far	963	42.7 (40.7 - 44.8)
	Very close	788	35.0 (33.0 – 37.0)
	Very far	492	21.8 (20.2 - 23.6)
	Missing	10	0.4 (0.2 - 0.8)
Method of general waste disposal	Burning	164	7.3 (6.2 - 8.4)
	Burying	17	0.8 (0.4 - 1.2)
	Communal rubbish	1,614	71.6 (69.7 - 73.5)
	Throw on ground	393	17.4 (15.9 - 19.1)
	Others	51	2.3 (1.7 – 3.0)
	Missing	14	0.6 (0.3 - 1.0)

Problems with rodents and disease vectors	Yes	2,200	97.6 (96.9 - 98.2)
	No	25	1.00 (0.7 - 1.6)
	Missing	28	1.2 (0.9 - 1.79)
Types of rodents and vectors	Mosquitoes	1,181	52.4 (50.3 - 54.5)
	Rats	1,697	75.3 (73.5 - 77.1)
	Snakes	177	7.9 (6.8 - 9.0)
	Flies	391	17.4 (15.8 - 19.0)
	Others	82	3.6 (2.9 - 4.5)

Personal hygiene approaches varied, as shown in **Table 5.8**. Water storage using jerry cans was the most common practice (60.6%), but buckets and traditional pots were also used (28.2% and 4.7% respectively). Most IDPs covered their water storage vessel (94.6%). A high proportion had a bath daily (94.8%); however, only 62.0% used soap regularly. Also, most IDPs reported washing their hands after using the toilet as well as before eating (89.7% and 87.6% respectively).

Table 5.8 – IDP personal hygiene practices

Personal hygiene practices		**n**	**% (95% CI)**
Water storage	Jerry cans	1,365	60.6 (58.5 - 62.6)
	Buckets	635	28.2 (26.4 - 30.1)
	Drums	205	9.1 (8.0 - 10.4)
	Traditional pots	107	4.7 (3.9 - 5.7)
	Others	49	2.2 (1.6 -2.9)
Covered water storage	Yes	2,132	94.6 (93.6 - 95.5)
	No	106	4.7 (3.9 - 5.7)
	Don't know	8	0.4 (0.2 - 0.7)
	Missing	7	0.3 (0.1 - 0.61)
Have a bath daily	Yes	2,135	94.8 (93.8 - 95.6)
	Sometimes	94	4.2 (3.4 - 5.1)
	No	20	0.9 (0.6 - 1.4)
	Missing	4	0.2 (0.1 - 0.5)
Bath frequently with soap	Yes	1,397	62.0 (60.0 – 64.0)
	Sometimes	656	29.1 (27.2 - 31.0)
	No	191	8.5 (7.4 - 9.7)
	Missing	9	0.4 (0.2 - 0.8)
Washing hands after using toilet	Yes	2,020	89.7 (88.3 - 90.9)
	Sometimes	176	7.8 (6.8 - 9.00)
	No	34	1.5 (1.1 - 2.1)
	Missing	23	1.02 (0.68 - 1.53)
Washing hands before eating	Yes	1,974	87.6 (86.2 - 88.9)
	Sometimes	150	6.7 (5.7 - 7.8)
	No	105	4.7 (3.9 -5.6)
	Missing	24	1.1 (0.7 -1.6)

5.3.4 Health outcomes and health service access

About one-third of households (28.9%) reported at least one death during their stay in the current camp **(Table 5.9)**. The most frequently reported cause of death was falling sick (71.2%), and about 56.2% of deaths were among children.

Individual health outcomes showed that nearly all participants had suffered varied health issues both communicable diseases (especially malaria), as well as non-communicable conditions such as high blood pressure.

Table 5.9 – Reported mortality experienced since arrival at the current camp

Mortality experience		**n**	**% (95% CI)**
Experienced death in household (n=781 households)	Yes	226	28.9 (25.8 – 32.3)
	No	555	71.1 (67.7 – 74.2)
Reported deaths in household by age group (n=226 households)	Children	127	56.2 (49.5 – 62.8)
	Adults	88	38.9 (32.5 – 45.6)
Causes of deaths (n=226 households)	Accident	30	13.3 (9.1 – 18.4)
	At birth	7	3.1 (1.3 – 6.3)
	Injury	2	0.9 (0.1 – 3.2)
	Nutrition deficiency	1	0.4 (0.0 – 2.4)
	Premature Birth	4	1.8 (0.5 – 4.5)
	Sickness	197	87.2 (82.1 – 91.2)
	Old age	1	0.4 (0.0 – 2.4)
	Unknown	4	1.8 (0.5 – 4.5)
	Missing	17	7.5 (4.4 – 11.8)

5.3.4.1 Primary Health outcomes

Of the IDPs sampled, 1,828 (81.1%) reported falling sick while in the current camp **(Table 5.10)**. The most reported illnesses were malaria (69.7%) and fever (28.3%). Common infectious diseases were faecal-oral water-borne illnesses such as typhoid (9.9%) and diarrhoea (6.5%) which included both watery stool and running stomach. Only 3.9% (71 IDPs) reported ever experiencing acute coughing, which is a respiratory condition common in overcrowded areas and dry arid regions like the northern part of the country.

Other reoccurring conditions reported were stomach pains, eye problems, pneumonia, musculoskeletal conditions, heartburn, and skin infections. Overall, 23% reported more than one of these common diseases.

Table 5.10 – IDP reported morbidity prevalence since arrival at the current camp

Health outcomes		**n**	**% (95% CI)**
Ever fallen sick on current camp (n=2,253)	Yes	1,828	81.1 (79.5 - 82.7)
	No	417	18.5 (16.9 - 20.2)
	Missing	8	0.4 (0.2 - 0.7)
Major diseases affecting those who had fallen sick (n=1,828)	Malaria	1,274	69.7 (67.5 - 71.8)
	Fever	517	28.3 (26.2 - 30.4)
	Cough	71	3.9 (3.0 - 4.9)
	Typhoid	180	9.8 (8.5 - 11.3)
	Running stomach	89	4.9 (3.9 - 6.0)
	Watery stool	29	1.6 (1.1 - 2.3)
	Others	104	5.7 (4.7 - 6.9)
	Multiple	424	23.2 (21.3 – 25.2)
Long-term illness (n=2,253)	Yes	457	20.3 (18.6 - 22.0)
	No	1,654	73.4 (71.5 - 75.2)
	Don't know	21	0.9 (0.6 - 1.4)
	Missing	121	5.4 (4.5 - 6.4)
Types of long-term illness experienced (n=457)	High blood pressure	90	19.7 (16.1 - 23.6)
	Stomach ulcer	173	37.9 (33.4 - 42.5)
	Headaches	45	9.8 (7.3 - 13.0)
	Back pain	16	3.5 (2.0 - 5.6)
	Pile	13	2.8 (1.5 - 4.8)
	Hepatitis	22	4.8 (3.0 - 7.2)
	Diabetes	10	2.2 (1.1 - 4.0)
	Hernia	12	2.6 (1.4 - 4.5)
	Others	75	16.6 (13.1 - 20.1)
	Multiple	56	12.3 (9.4 - 15.6)

Figure 5.2 displays the distribution of the common diseases by age group. The chart showed conditions were not limited to specific age groups. Coughs were more common among children under <5 years, however the disease prevalence order of occurrences among under <5 years were malaria (49%), fever (25%), cough (9%) and diarrheal diseases (7%) **(Figure 5.3).**

Figure 5.2 – Distribution of common diseases among IDPs

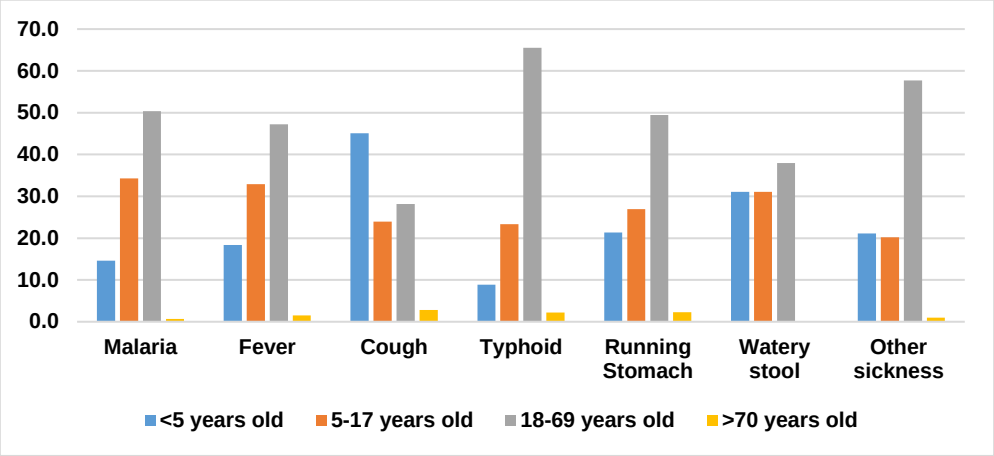
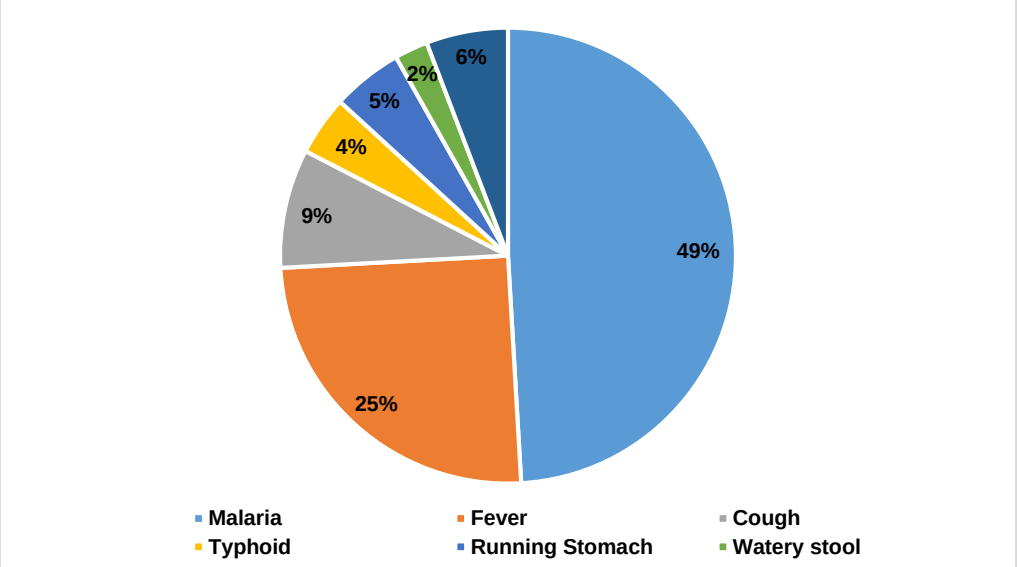


Figure 5.3 – Distribution of common diseases among children under-5



With respect to non-communicable illnesses, one-fifth reported suffering from persisting conditions, for instance, stomach ulcers (37.9%) and headaches (9.9%). Other NCDs of global concern reported were high blood pressure (19.9%) and diabetes (2.2%). Rarely monitored conditions such as piles (2.8%), also known as haemorrhoids, and hernia (2.6%) were also observed. About 2.5% from the total sample of IDPs lived with more than one long-term illness.

5.3.4.2 Health outcome distribution by camps

Table 5.11 and 5.12 show the health outcome distribution by camps. A consistent pattern was observed in the reported common diseases, with over 75% of IDPs ever falling sick in all the camps. Kyauta and Gaida camps had the highest proportion of IDPs reporting common illnesses 93.4% and 95.6% respectively.

Malaria prevalence was highest in all locations with reports of this affecting up to 85% (range = 53.5% - 84.7%) of those who experienced acute health conditions. Fever and typhoid, although common, were inconsistent across the camps (6.0% - 39.8% and 0.5% - 40.1% respectively). Serious cough was most common in the FCT locations (Durumi and Kuchingoro) while no coughing was reported in Bakassi and Gaida. Diarrheal diseases were evident in all states, with being watery stool reported in all but three camps (Gaida, Kyauta, and Mallum).

Prevalence of persisting health conditions was generally uneven (range = 7.1% - 45.7%). For example, stomach ulcer which was the highest reported condition in Stefanos camp (55.3%) was the least in Bakassi camp (11.1%). Chronic diseases were more common in the north-east zone as evident by the higher proportion of high blood pressure, pile, and hernia in Bakassi camp, and the presence of all major long-term diseases in Mallum camp. Multi-morbidity (both acute and long-term illnesses) was reported in all the camps.

Table 5.11 – Distribution of observed IDP acute diseases by camp

Health outcomes *n* (%; 95% CI)		**Bakassi (n=149)**	**Durumi (n=678)**	**Gaida (n=68)**	**Gullum (n=105)**	**Gurku (n=240)**	**Kuchingoro (n=538)**	**Kyauta (n=91)**	**Mallum (n=155)**	**Stefanos (n=229)**
Ever fallen sick on current camp	Yes	118 (79.2; 71.8 - 85.4)	555 (81.9; 78.7 - 84.7)	65 (95.6; 87.6 – 99.1)	86 (81.9; 73.2 - 88.7)	186 (77.5; 71.7 - 82.6)	414 (77.0; 73.39 - 80.4)	85 (93.4; 86.2 - 97.5)	137 (88.4; 83.35 - 93.43)	182 (79.5; 73.7 - 84.5)
	No	28 (18.8; 12.9 - 26.0)	123 (18.1; 15.3 - 21.3)	3 (4.41; 0.0 - 12.4)	19 (18.1; 11.3 - 26.8)	53 (22.1; 17.0 - 27.9)	122 (22.7; 19.2 - 26.5)	5 (5.5; 1.8 - 12.4)	18 (11.6; 7.0 - 17.7)	46 (20.1; 15.1 - 25.9)
	Missing	3 (2.01; 0.4 - 5.8)	0	0	0	1 (0.4; 0.0 - 2.3)	2 (0.4; 0.0 - 1.3)	1 (1.1; 0.0 - 6.0)	0	1 (0.4; 0.0 - 2.4)
Conditions among those who had ever fallen sick on current camp	Malaria	92 (78.0; 69.4 - 85.1)	367(66.1; 62.0 - 70.1)	45 (66.2; 53.7 - 77.2)	46 (53.5; 42.4 - 64.3)	127 (68.3; 61.1 - 74.9)	285 (68.8; 64.1 - 73.3)	72 (84.7; 75.3 - 91.6)	102 (74.5; 66.3 - 81.3)	138 (75.8; 68.9 - 81.9)
	Fever	18 (15.3; 9.3 - 23.0)	185 (33.3; 29.4 - 37.4)	26 (38.2; 26.7 - 50.8)	28 (32.6; 22.8 - 43.5)	74 (39.8; 32.7 - 47.2)	146 (35.3; 30.7 - 40.1)	10 (11.8; 5.8 - 20.6)	19 (13.9; 8.6 - 20.8)	11 (6.0; 3.1 - 10.6)
	Cough	0	36 (6.5; 4.4 - 8.5)	0	4 (4.7; 1.3 - 11.5)	5 (2.7; 0.9 - 6.2)	19 (4.6; 2.8 - 7.1)	1 (1.2; 0.0 - 6.4)	3 (2.2; 0.5 - 6,3)	3 (1.6; 0.3 - 4.7)
	Typhoid	13 (11.0; 6.0 - 18.1)	10 (1.8; 0.9 - 3.3)	15 (22.1; 12.9 - 33.8)	10 (11.6; 5.7 - 20.3)	8 (4.3; 1.4 - 7.2)	2 (0.5; 0.1 - 1.7)	26 (30.6; 21.0 - 41.5)	23 (16.8; 10.9 - 24.1)	73 (40.1; 32.9 - 47.6)
	Running stomach	8 (6.8; 3.0 - 12.9)	38 (6.8; 4.9 - 9.3)	3 (4.4; 0.9 - 12.4)	3 (3.5; 0.7 - 9.9)	9 (4.8; 2.2 - 9.0)	22 (5.3; 3.4 - 7.9)	1 (1.2; 0.0 0 6.4)	4 (2.9; 0.8 - 7.3)	1 (0.5; 0.0 - 3.0)
	Watery stool	4 (3.4; 0.9 - 8.5)	9 (1.6; 0.7 - 3.1)	0	4 (4.7; 1.3 – 11.5)	2 (1.1; 0.1 - 3.8)	9 (2.2; 1.0 - 4.1)	0	0	1 (0.5; 0.0 – 3.0)
	Others	8 (6.8; 3.0 - 12.9)	30 (5.4; 3.7 - 7.6)	1 (1.5; 0.0 - 7.9)	8 (9.3; 4.1 - 17.5)	7 (3.8; 1.5 - 7.6)	18 (4.3; 2.6 - 6.8)	5 (5.9; 1.9 - 13.2)	10 (7.3; 3.6 - 13.0)	17 (9.3; 5.5 - 14.5)
	Multi-morbidity	26 (22.0; 14.9 - 30.6)	111 (20.0; 16.7 - 23.6)	24 (35.3; 24.1 - 47.8)	17 (19.8; 12.0 - 29.8)	35 (18.8; 13.2 - 24.4)	83 (20.0; 16.3 - 24.2)	29 (34.1; 24.0 - 44.2)	31 (22.6; 15.9 - 30.6)	68 (37.4; 30.3 - 44.8)

Table 5.12 – Distribution of observed IDP persisting and long-term conditions by camp

Health outcomes *n* (%; 95% CI)		**Bakassi (n=149)**	**Durumi (n=678)**	**Gaida (n=68)**	**Gullum (n=105)**	**Gurku (n=240)**	**Kuchingoro (n=538)**	**Kyauta (n=91)**	**Mallum (n=155)**	**Stefanos (n=229)**
Have a long-term illness	Yes	36 (24.2; 17.5 - 31.8)	94 (13.9; 11.4 - 16.7)	28 (41.2; 29.4 - 53.8)	48 (45.7; 36.0 - 55.7)	26 (10.8; 7.2 - 15.5)	38 (7.1; 5.0 - 9.6)	36 (39.6; 29.5 - 50.4)	66 (42.6; 34.7 - 50.8)	85 (37.1; 30.8 - 43.7)
	No	93 (62.4; 54.1 - 70.2)	545 (80.4; 77.2 - 83.3)	38 (55.9; 43.3 - 87.9)	54 (51.4; 41.5 - 61.3)	197 (82.1; 76.6 - 86.7)	464 (86.2; 83.0 - 89.0	51 (56.0; 45.2 - 66.4)	85 (54.8; 46.7 - 62.8)	127 (55.5; 48.8 - 62.0)
	Don't know	0	6 (0.9; 0.3 - 1.9)	0	0	6 (2.5; 0.9 - 5.4)	7 (1.3; 0.5 - 2.7)	1 (1.1; 0.0 - 6.0)	0	1 (0.4; 0.0 - 2.4)
	Missing	20 (13.4; 8.4 - 20.0)	33 (4.9; 3.4 - 6.8)	2 (2.9; 0.4 - 10.2)	3 (2.9; 0.6 - 8.1)	11 (4.6; 2.3 - 8.1)	29 (5.4; 3.6 - 7.6)	3 (3.3; 0.7 - 9.3)	4 (2.6; 0.7 - 6.5)	16 (7.0; 4.0 - 11.1)
Conditions among those who had experienced long-term illneses	High blood pressure	19 (52.8; 35.5 - 69.6)	16 (17.0; 10.1)	8 (28.6; 13.2 - 48.7)	9 (18.8; 8.9 - 32.6)	2 (7.7; 0.9 - 25.1)	9 (23.7; 11.4 - 40.2)	9 (25.0; 12.1 - 42.2)	8 (12.1; 5.4 - 22.5)	10 (11.8; 5.8 - 20.6)
	Stomach ulcer	4 (11.1; 3.1 - 26.1)	29 (30.9; 21.7 - 41.2)	6 (21.4; 8.3 - 41.0)	18 (37.5; 24.0 - 52.6)	19 (73.1; 52.2 - 88.4)	10 (26.3; 13.4 - 43.1)	15 (41.7; 25.5 - 59.2	25 (39.4; 27.6 - 52.2)	47 (55.3; 44.1 - 66.1)
	Headaches	4 (11.1; 3.1 - 26.1)	3 (3.2; 0.7 - 9.0)	8 (28.6; 13.2 - 48.7)	5 (10.4; 3.5 - 22.7)	1 (3.8; 0.1 - 19.6)	0	6 (16.7; 6.4 - 32.8)	9 (13.6; 6.4 - 24.3)	9 (10.6; 5.0 - 19.2)
	Back pain	0	1 (1.1; 0.0 - 5.8)	0	4 (8.3; 2.3 - 20.0)	0	1 (2.6; 0.1 - 13.8)	1 (2.8; 0.1 - 14.5)	7 (10.6; 4.4 - 20.6)	2 (2.4; 0.3 - 8.2)
	Pile	8 (22.2; 10.1 - 39.2)	4 (4.3; 1.2 - 10.5)	0	0	0	0	0	1 (1.5; 0.0 - 8.2)	0
	Hepatitis	0	0	0	2 (4.2; 0.5 - 14.3)	0	0	0	4 (6.1; 1.7 - 14.8)	16 (18.8; 11.2 - 28.8)
	Diabetes	0	1 (1.1; 0.0 - 5.8)	3 (10.7; 2.3 - 28.2)	2 (4.2; 0.5 - 14.3)	1 (3.8; 0.1 - 19.6)	1 (2.6; 0.1 - 13.8)	0	1 (1.5; 0.0 - 8.2)	1 (1.2; 0.0 - 6.4)
	Hernia	8 (22.2; 10.1 - 39.2)	1 (1.1; 0.0 - 5.8)	0	0	0	0	0	3 (4.5; 0.9 - 12.7)	0
	Others	0	10 (10.6; 5.2 - 18.7)	6 (21.4; 8.3 - 41.0)	14 (29.2; 17.0 - 44.1)	4 (15.4; 4.4 - 34.9)	6 (15.8; 6.0 - 31.3)	8 (22.2; 10.1 - 39.2)	11 (16.7; 8.6 - 27.9)	17 (20.0; 12.1 - 30.1)
	Multi-morbidity	8 (22.2; 10.1 - 39.2)	9 (9.6; 4.5 - 17.4)	5 (17.9; 6.1 - 36.9)	6 (12.5; 4.7 - 25.2)	3 (11.5; 2.4 - 30.2)	1 (2.6; 0.1 - 13.8)	6 (16.7; 6.4 - 32.8)	10 (15.2; 7.5 - 26.1)	8 (9.4; 3.2 - 15.6)

Table 5.13 shows a simple comparative ratio of IDPs who reported ever being sick or had experienced a persisting health condition per camp. Among every 10 IDPs, 8 to 9 experienced one or more of the common diseases. This was lower for persisting illnesses at 1 to 4 for every 10 IDPs.

Gaida and Kyauta camps had the highest ratios for both disease groups. Mallum and Gullum camps had a high prevalence of longer-term health conditions. As shown in the audit, these four were informal or unofficial camps, and Gaida and Kyauta camps were situated in dispersed layouts **(see Section 4.3)**. On the contrary, long-term illnesses appeared to be lower in Durumi, Gurku, and Kuchingoro, which were all in the north-central zone.

Table 5.13 – Comparative ratio of IDP health outcomes by camp

Camp Name	Sample size	Ratio of disease report (per 10 IDPs)	
		Acute	Long-term
Bakassi	149	8.08	2.79
Durumi	678	8.19	1.46
Gaida	68	9.56	4.24
Gullum	105	8.19	4.71
Gurku	240	7.78	1.14
Kuchingoro	538	7.72	0.75
Kyauta	91	9.44	4.09
Mallum	155	8.84	4.37
Stefanos	229	7.98	3.99

Statistical differences between the two camp types (formal vs informal) was not conducted because camp management, and resource supply and accessibility based on that grouping was inconsistent and varied across all the camps. For instance, Gurku camp was a planned camp so considered formal but was managed only by IDPs, therefore had limited access to healthcare (see **Section 4.3 and 6.4**). Association between the individual camps and the primary outcome (falling sick) was however explored, and presented in the

univariate analysis results shown in section on association between utilization and the health outcomes (see **Section 5.2.5**)

5.3.4.3 Healthcare accessibility

Despite the high disease prevalence, health services were not accessed by all affected IDPs **(Table 5.14)**. Of the 1,828 who experienced common diseases, 77.6% sought medical care, and this was less among those with long-term conditions at 65.6% (300/457). The most common health personnel consulted were doctors (40.5%), pharmacists/chemists (23.7%), nurses (9.6%) and midwives (0.3%). Other unconventional health consultations were with camp secretaries (1.9%) and traditional doctors (0.1%). Accessing medication at a pharmacy could also be based on self-referral. This, therefore, inferred the likely overlap between doctor or pharmacist prescriptions and self-medicated care.

Table 5.14 – Health service access

Healthcare assessed		**n**	**% (95% CI)**
No. of IDPs with predominant diseases who received medical attention (n=1,828)	Yes	1,418	77.6 (75.6 - 79.4)
	No	397	21.7 (19.9 - 23.7)
	Missing	13	0.7 (0.4 - 1.2)
No. of IDPs with long term illness who received medical attention (n=457)	Yes	300	65.6 (61.1 - 70.0)
	No	140	30.6 (26.6 - 35.0)
	Missing	17	3.7 (2.3 - 5.9)
Source of medical attention for predominant disease (n=1,828)	CHW	4	0.2 (0.1 - 0.6)
	Camp clinic	100	5.5 (4.5 - 6.6)
	Camp secretary	35	1.9 (1.3 - 2.67)
	Doctor	741	40.5 (38.3 - 42.8)
	Don't know	1	0.1 (0.0 - 0.3)
	Donations	1	0.1 (0.0 - 0.3)
	Drug vendors	3	0.2 (0.0 - 0.5)
	Home treatment	5	0.3 (0.1 - 0.6)
	Hospital	73	4.0 (3.1 - 5.00)
	Midwife	5	0.3 (0.1 - 0.6)
	Native herbs	3	0.2 (0.0 - 0.5)
	Nurse	176	9.6 (8.3 - 11.1)
	Pharmacy	434	23.7 (21.8 - 25.8)
	Primary health post	1	0.1 (0.0 - 0.3)
	Self-medication	86	4.7 (3.8 - 5.8)
	Somebody	1	0.1 (0.0 - 0.3)
	Traditional doctor	2	0.1 (0.0 - 0.4)
	Missing	157	8.6 (7.3 - 1.0)

5.3.4.4 Vaccination services

About 62.4% of IDPs reported receiving some form of vaccination in their lifetime, although 3.3% were unsure **(Table 5.15)**. Only 10.6% of those vaccinated had their vaccination card as evidence of their vaccination history. The two most common vaccines the IDPs recalled receiving were BCG (34.9%) and OPV (Oral Polio Vaccine) (31.5%). BCG (Bacillus Calmette–Guéri) and OPV are vaccines used against tuberculosis and polio, respectively. Vaccines least reported were for pneumonia, rotavirus, and MMR (measles-mumps-rubella).

Only 15.5% (350) among those vaccinated received the vaccines while residing in the camps, and the most common vaccines received in the camps were also OPV (31.1%) and BCG (13.4%). The findings showed more attention was focused on polio prevention.

Table 5.15 – IDP reported vaccination history and camp vaccine administration uptake

Vaccination coverage		**n**	**% (95% CI)**
Ever received vaccination in life time (n=2,253)	Yes	1,405	62.4 (60.3 - 64.3)
	No	756	33.6 (31.6 - 35.5)
	Don't know	74	3.3 (2.6 - 4.1)
	Missing	18	0.8 (0.5 - 1.3)
Type of vaccine ever received (n=1,405)	OPV	443	31.5 (29.1 – 33.4)
	DPT	92	6.5 (5.3 - 8.0)
	BCG	490	34.9 (32.4 - 37.4)
	Measles	27	1.9 (1.3 - 2.8)
	Tetanus	124	8.8 (7.4 - 10.4
	Tetravalent	12	0.9 (0.4 - 1.5)
	Pentavalent	9	0.6 (0.3 - 1.2)
	Rotavirus	1	0.1 (0.0 - 0.4)
	Pneumonia	1	0.1 (0.0 - 0.4)
	MMR	1	0.1 (0.0 - 0.4)
	Hepatitis	23	1.6 (1.0 - 2.4)
	Others	17	1.2 (0.7 - 1.70
	Don't know	80	5.7 (4.8 - 7.0)
	Missing	377	26.8 (24.5- 29.2)
Received vaccination on current camp (n=2,253)	Yes	350	15.5 (14.4 - 17.1)
	No	1,842	81.8 (80.1 - 83.3)
	Don't know	17	0.8 (0.4 - 1.2)
	Missing	44	2.0 (1.2 - 2.6)

Type of vaccines among those who received vaccinations on the camp (n=350)	OPV	109	31.1 (26..3 - 36.3)
	DPT	20	5.7 (3.5 - 8.7)
	BCG	47	13.4 (10.0 - 17.5)
	Measles	2	0.6 (0.1 - 2.0)
	Tetanus	70	20.0 (15.9 - 24.6)
	Pentavalent	3	0.9 (0.2 - 2.5)
	Hepatitis	19	5.4 (3.3 - 8.3)
	Others	8	2.3 (1.0 - 4.5)
	Don't know	15	4.3 (2.4 - 0.7)
	Missing	192	54.9 (49.5 - 60.2)
Have a vaccination card among who had ever been vaccinated (n=1,405)	Yes	149	10.6 (9.0 - 12.3)
	No	675	48.0 (45.4 - 50.7)
	Don't know	4	0.3 (0.1 - 0.7)
	Missing	603	42.9 (40.3 - 45.6)

5.3.4.5 Maternal and child health (MCH) and vaccination

Following the methodology for this study, from the 1,141 females sampled, those under-5 years (202, 7.7%) were excluded from the MCH analysis **(Table 5.16)**. The 5-17 years age group was included, but considering most were young, single and unmarried, the majority under-18 years gave no response, and this was captured as missing data. The final number considered for the MCH analysis was 939 female IDPs.

Of the 939 females, most were 18-30 years old, about 25% had given birth to children while in the camp, and 8.3% were currently pregnant. Commonplace for child delivery was on the camp premises (59.8%) followed by hospitals (32.8%) which were not within the camps **(See Section 4.3.3).** Home deliveries were not common (0.9%), but may have likely been included among deliveries within the “camp” category

Vaccination during pregnancy was high at 92.7% for both those currently pregnant or had given birth in the camp. However, only 86.0% of children born in the camps had received any vaccination. Overall, vaccination coverage among mothers and children was higher compared to the general IDP sampled population at 62.4%.

Table 5.16 – IDP maternal and child health outcomes

Maternal and child vaccination		n	% (95% CI)
Age distribution of females (n=1,141)	<5 years old	202	17.7 (15.5 - 20.0)
	5-17 years old	324	28.4 (25.8 - 31.1)
	18-30 years old	394	34.5 (31.8 - 37.4)
	31-50 years old	168	14.7 (12.8 - 16.9)
	51-70 years old	43	3.8 (2.8 - 5.0)
	>70 years old	10	0.9 (0.4 - 1.6)
Currently pregnant (n=939)	Yes	78	8.3 (6.6 - 10.3)
	No	555	59.1 (55.9 - 62.3)
	Don't know	4	0.5 (0.2 - 1.2)
	Missing	302	32.2 (29.2 - 35.3)
Delivered a child in camp (n=939)	Yes	229	24.4 (21.7 - 27.3)
	No	434	46.2 (43.0 - 49.5)
	Missing	276	29.4 (26.5 - 32.4)
Women who have ever given birth **OR** Currently pregnant in camp (n=939)		232	24.7 (22.0 - 27.6)
Currently pregnant AND previously given birth (n=232)		22	9.5 (6.0 - 14.0)
Place of child delivery among those who delivered in camp (n=229)	Camp	137	59.8 (53.2 - 66.2)
	Health centre	10	4.4 (2.1 - 7.9)
	Hospital	75	32.8 (26.7 - 39.2)
	Home delivery	2	0.9 (0.1 - 3.1)
	Missing	5	2.2 (0.7 - 5.0)
Number of babies born in camp (n=229)	1	214	93.4 (89.4 - 96.3)
	2	13	5.7 (3.1 - 9.5)
	3	1	0.4 (0.0 - 2.4)
	Missing	1	0.4 (0.0 - 2.4)
Women vaccinated during pregnancy (n=232)	Yes	215	92.7 (88.5 - 95.7)
	No	17	7.3 (4.3 - 11.5)
Babies born in camp and vaccinated (n=229)	Yes	197	86.0 (80.8 - 90.2)
	No	28	12.2 (8.3 - 17.2)
	Don't know	1	0.4 (0.0 - 2.4)
	Missing	3	1.3 (0.3 - 3.8)

5.3.4.6 Vaccination perception and management

Table 5.17 shows that most IDPs reported that their attitude towards vaccination was different after being displaced (49.9%). Feedback on vaccination was generally positive (55.7%) and most referred to vaccination using the following terms: “helpful”, “advisable”, “good practice”, “important for children”, “prevents and reduces disease in the camp, e.g. skin diseases”, “need it for survival” and “to save lives”.

About 7.2% of the IDPs stated they were open and willing to be vaccinated. Some IDPs had no personal opinion but assumed it was important (7.2%), while a few were indifferent (0.1%). A limited proportion plainly indicated not wanting any vaccinations (0.2%) and the reasons given were either not liking it

or disliking injections. In terms of vaccination management, about 15.4% were involved in camp vaccine-related activities.

Table 5.17 – IDP vaccine perception and involvement in camp vaccination management

Vaccination Management (n=2,253)		n	% (95% CI)
Have the same immunisation perception before stay in camp	Yes	114	5.1 (4.2 - 6.0)
	No	1,124	49.9 (47.8 - 52.0)
	NA	381	16.9 (15.4 - 18.5)
	Missing	634	28.1 (26.3 - 30.0)
Most common vaccination perceptions	It is good	1,034	45.9 (43.8 - 48.0)
	Open and willing to be vaccinated	163	7.2 (6.2 - 8.4)
	Have no opinion, but think it's important	18	0.8 (0.5 - 1.3)
	Indifferent	3	0.1 (0.0 - 0.4)
	Don't want it	5	0.2 (0.1 - 0.5)
	Others	30	1.3 (0.9 - 1.9)
	NA	381	16.9 (15.4 - 18.5)
Involved in camp vaccination activities	Yes	346	15.4 (13.9 - 16.9)
	No	643	28.5 (26.7 - 30.4)
	NA	381	16.9 (15.4 - 18.5)
	Missing	883	39.2 (37.2 - 41.2)

Note: "NA" = All children within the under-5 years age group excluded from these questions

5.3.5 Association between resource utilization and health outcomes

In the univariate analysis, all factors considered except education, the distance between toilets and drinking water sources, and handwashing practices were associated with a higher likelihood of falling sick **(Table 5.18)**. Results from analysis on association to outcomes based on individual camps showed the risk of falling sick was significant higher in three camps: Bakassi, Gaida and Kyauta camps.

After adjusting for confounders in the first multivariate regression **(Model A)**, ten factors were significantly associated with the increased risk of falling sick. These factors were gender, age, having a long-term illness, duration on the camp, household size, source of drinking water, type of toilets, the distance between toilets and drinking water sources, hand washing before eating and problems with rodents. However, for some subgroups, a few of the non-significant variables showed a significant positive association with illness. These factors were the use of river as a water source (aOR=0.34; *p*= 0.01)

and living in Gaida or Kyauta camps ((aOR=8.34; *p*= 0.01) and (aOR=5.16; *p*= 0.01), respectively).

In the final regression model **(Model B)**, only factors significant in **Model A** were considered. At this stage, only seven factors remained significant to the increased chances of becoming sick. As such, gender, age, having a long-term illness, household size, type of toilets, distance to toilets and problems with rodents were positively associated with the increased risk of falling sick **(Table 5.19)**. While duration in camp was showed borderline significance (aOR=1.16; *p*= *0.051*).

These results showed the likelihood of falling sick was highly influenced by the age of the IDPs, mostly among those under-5 and between 18-69 years old (aOR=0.0001). It was also about 53% more likely for females compared to males (aOR=1.53, *p*=0.001) and 7% higher for those living in overcrowded households (aOR=1.07, *p*=0.001). Falling sick was nearly three times more likely if the IDPs had a long term-illness (aOR=2.72, *p*=0.0001) or two times likely if they used outdoor toilets (aOR=2.32, *p*=0.02). Also, experiencing poorer health was nearly four times as likely if the IDPs had rodent problems (aOR=3.71, *p*=0.001). Furthermore, although staying longer in the camp showed a weak association, it still increased the chances of falling sick by 16% (aOR=1.16, *p*=0.051).

Table 5.18 – Association between risk factors and falling sick (Logistic regression)

Risk Factors		Univariate Analysis		Multivariate Analysis (Model A)	
		Unadjusted OR (95% CI)	p-value	Adjusted OR	p-value
Camp location	Bakassi		0.0003**		0.15
	Durumi	1.04 (0.66 - 1.65)	0.85	1.22 (0.58 -2.57)	0.6
	Gaida	5.01 (1.47 - 17.12)	0.01**	8.34 (1.87 -37.10)	0.01**
	Gullum	1.05 (0.55 - 2.00)	0.89	2.12 (0.72 - 6.20)	0.17
	Gurku	0.82 (0.49 - 1.36)	0.44	2.24 (0.90 - 5.55)	0.08
	Kuchingoro	0.79 (0.50 - 1.25)	0.31	1.25 (0.55 - 2.84)	0.59
	Kyauta	3.98 (1.48 - 10.72)	0.01**	5.16 (1.45 - 18.37)	0.01**
	Mallum	1.76 (0.93 - 3.34)	0.08	1.61 (0.44 - 5.92)	0.48
	Stefanos	0.92 (0.55 - 1.55)	0.76	2.19 (0.78 - 6.13)	0.14
Gender	Male				
	Female	1.46 (1.18 - 1.81)	0.005**	1.57 (1.20 - 2.06)	0.001**
Age	<5 years		0.006**		0.001**
	5-17 years old	1.50 (1.07 - 2.10)	0.02**	0.76 (0.47 - 1.23)	0.27
	18-69 years old	0.90 (0.67 - 1.20)	0.47	0.42 (0.26 - 0.66)	0.001**
	>70 years old	4.58 (0.60 - 34.76)	0.14	1.93 (0.23 - 15.86)	0.54
Religion	Christian		0.001**		
	Muslim	1.43 (1.15 - 1.78)		1.41 (0.95 - 2.09)	0.09
Education	None		0.46		0.88
	Basic school	0.89 (0.71 - 1.11)	0.29	0.97 (0.72 - 1.31)	0.85
	Secondary and above	0.81 (0.52 - 1.27)	0.36	0.87 (0.50 - 1.51)	0.61
Ever received vaccination in life time	No		0.01**		
	Yes	1.33 (1.06 - 1.66)		1.24 (0.92 - 1.67)	0.16
Have a long term illness	No				
	Yes	2.58 (1.84 - 3.61)	0.001**	2.74 (1.85 - 4.07)	0.001**
Duration of time in camp		1.22 (1.07 - 1.39)	0.003**	1.20 (1.01 - 1.44)	0.04**

Note: *****p<0.05. Factors adjusted in Model A: camp location, gender, age, religion, education, vaccination, long term illness, and duration of time in camp***

Risk Factors		Univariate Analysis		Multivariate Analysis (Model A)	
		Unadjusted OR (95% CI)	p-value	Adjusted OR (95% CI)	p-value
Type of shelter	Aluminium sheet		0.01**		0.08
	Concrete building	1.77 (0.43 - 7.25)	0.43	1.53 (0.32 - 7.37)	0.6
	Mud	2.96 (0.72 - 12.22)	0.13	1.77 (0.37 - 8.55)	0.48
	Tent	2.12 (0.53 - 8.54)	0.29	3.76 (0.68 - 20.89)	0.13
	Thatch	4.30 (0.97 - 18.99)	0.05	3.80 (0.61 - 23.50)	0.15
Household size		1.07 (1.03 - 1.10)	0.001**	1.07 (1.02 - 1.12)	0.003**
Average daily food intake	1 meal		0.03**		0.21
	2 meals	0.85 (0.55 - 1.32)	0.47	0.71 (0.41 - 1.25)	0.24
	3 or more meals	0.66 (0.42 - 1.02)	0.06	0.62 (0.35 - 1.09)	0.1
Source of Drinking Water	Borehole		0.001**		0.05
	Public stand post	0.92 (0.46 - 1.87)	0.83	0.97 (0.40 - 2.32)	0.94
	Rain	1		1	
	River	0.39 (0.21 - 0.73)	0.001**	0.34 (0.15 - 0.74)	0.01**
	Street vendor	0.75 (0.51 - 1.10)	0.14	0.69 (0.43 - 1.13)	0.14
	Water tank	0.35 (0.06 - 2.08)	0.25	1	
	Well	1.61 (1.15 - 2.26)	0.01**	1.12 (0.64 - 1.93)	0.7
	None	1		1	
Water storage Methods	Jerry cans	1.35 (1.09 - 1.67)	0.01**	1.23 (0.67 - 2.23)	0.5
	Bucket	0.74 (0.59 - 0.93)	0.01**	0.74 (0.41 - 1.31)	0.29
	Drums	0.90 (0.63 - 1.29)	0.56	1.00 (0.49 - 2.07)	0.99
	Traditional pots	1.05 (0.63 - 1.75)	0.84	0.96 (0.41 - 2.25)	0.93
	Other water storage	0.69 (0.36 - 1.34)	0.28	0.50 (0.19 - 1.33)	0.17
Cover water storage	No		0.1		0.38
	Yes	0.90 (0.54 - 1.51)	0.69	0.88 (0.45 - 1.73)	0.72
	Don't know	0.20 (0.05 - 0.89)	0.04**	0.23 (0.03 - 1.83)	0.17

Note: ***p<0.05. Factors adjusted in Model A: camp location, gender, age, religion, education, vaccination, long term illness, and duration of time in camp***

Risk Factors		Univariate Analysis		Multivariate Analysis (Model A)	
		Unadjusted OR (95% CI)	p-value	Adjusted OR (95% CI)	p-value
Type of toilets used	Mobile toilet		0.001**		0.01**
	Outdoor/Bush	1.80 (1.03 - 3.14)	0.04**	2.81 (1.29 - 6.12)	0.01**
	Pit	2.38 (1.35 - 4.20)	0.001**	2.41 (1.08 - 5.35)	0.03**
	Water closet	1.52 (0.82 - 2.84)	0.19	1.92 (0.78 - 4.74)	0.16
	Others	0.49 (0.22 - 1.09)	0.08	0.46 (0.13 - 1.62)	0.23
Distance between toilet and drinking water	Not too far		0.15		0.03**
	Very close	0.93 (0.72 - 1.19)	0.54	0.97 (0.69 - 1.35)	0.84
	Very far	0.73 (0.56 - 0.96)	0.02**	0.61 (0.42 - 0.87)	0.01**
Washing hands after using toilet	No		0.18		0.21
	Yes	1.82 (0.86 - 3.83)	0.12	0.44 (0.08 - 2.28)	0.33
	Sometimes	2.52 (1.08 - 5.89)	0.03**	0.74 (0.13 - 4.15)	0.73
Washing hands before eating	No		0.27		0.04**
	Yes	1.27 (0.79 - 2.05)	0.32	0.71 (0.31 - 1.60)	0.41
	Sometimes	0.92 (0.51 - 1.68)	0.79	0.38 (0.16 - 0.95)	0.04**
Problems with rodents and disease vectors	No				
	Yes	4.22 (1.91 - 9.31)	0.001**	4.02 (1.59 - 10.15)	0.003**

Note: ***p<0.05. Factors adjusted in Model A: camp location, gender, age, religion, education, vaccination, long term illness, and duration of time in camp***

Table 5.19 – Factors associated with falling sick (Logistic regression model)

Multivariate Analysis (Model B)			
Risk Factors		**Adjusted OR (aOR)**	**p-value**
Gender	Male		
	Female	1.53 (1.19 - 1.96)	0.001**
Age	<5 years		0.001**
	5-17 years old	0.82 (0.52 -1.28)	0.38
	18-69 years old	0.43 (0.28 - 0.65)	0.001**
	>70 years old	2.37 (0.30 - 18.93)	0.42
Have a long-term illness	No		
	Yes	2.72 (1.88 - 3.94)	0. 001**
Duration of time in camp		1.16 (1.00 - 1.36)	0.051
Household size		1.07 (1.03 - 1.11)	0.001**
Source of drinking water	Borehole		0.06
	Public stand post	1	
	Rain	0.88 (0.39 - 1.98)	0.76
	River	1	
	Street vendor	0.34 (0.16 - 0.72)	0.001**
	Water tank	0.76 (0.48 - 1.20)	0.23
	Well	0.44 (0.04 - 4.61)	0.49
	None	1.17 (0.78 - 1.76)	0.45
Type of toilets used	Mobile toilet		0.003**
	Outdoor/Bush	2.37 (1.14 - 4.94)	0.02**
	Pit	1.90 (0.91 - 3.98)	0.09
	Water closet	1.36 (0.61 - 3.03)	0.46
	Others	0.49 (0.14 - 1.69)	0.26
Distance between toilet and drinking water	Not too far		0.01**
	Very close	1.08 (0.80 - 1.45)	0.62
	Very far	0.63 (0.46 - 0.87)	0.01**
Washing hands before eating	No		0.17
	Yes	0.69 (0.34 - 1.42)	0.31
	Sometimes	0.48 (0.21 - 1.07)	0.07
Problems with rodents and disease vectors	No		
	Yes	3.71 (1.60 - 8.60)	0.002**

Note: *****p<0.05. Factors adjusted in Model B: age, gender, long term illness, and duration of time in camp***

5.3.6 Camp Management

Table 5.20 shows 17.7% of the IDPs sampled were involved in camp management. The most common roles were related to managing the environment and surrounding areas (42.9%). This included cleaning of the camp premises, toilets, and kitchens; and these were performed mainly by women.

Committee members represented 10.3% of the management roles. The IDP leadership team positions included camp chairmen, kitchen chairmen, floor

members, sub-group leaders, for example, female leaders and Local Government Area (LGA) leaders. Other common responsibilities included offering advice, counsel and settling disputes (10%). Such advice was usually given by the elderly and mostly offered to women, leaders and during committee meetings and camp activity planning.

Some IDPs who were not committee members reported to also attending committee meetings (5.8%) based on invitation. Distribution of resources (3.3%) and advocacy (1.8%) was designated to specific people in some camps, and those roles involved soliciting for support and distribution of resources received. Some IDPs performed dual roles, e.g. a committee secretary who also gave advice, and women being involved in both environmental cleaning and cooking.

Table 5.20 – Outline of IDP camp management roles and responsibilities

Camp Management		**n**	**% (95% CI)**
Involvement in camp management (n=2,253)	Yes	399	17.7 (16.2 - 19.3)
	No	798	35.4 (33.5 - 37.4)
	NA	381	16.9 (15.4 - 18.5)
	Missing	675	30.0 (28.1 - 31.9)
Top 15 camp management roles (n=399)	Environmental cleaning	171	42.9 (37.9 - 47.9)
	Community services	55	13.8 (10.6 - 17.6)
	Committee members	41	10.3 (7.5 - 13.7)
	Offer advice (counsel)	40	10.0 (7.3 - 13.4)
	Attend meetings	23	5.8 (3.7 - 8.5)
	Maintenance	19	4.8 (2.9 - 7.3)
	Community security	19	4.8 (2.9 - 7.3)
	Cooking	17	4.3 (2.5 - 6.7)
	Planning and organizing event or meet	14	3.5 (1.9 - 5.8)
	Distribution of resources	13	3.3 (1.7 - 5.5)
	Advocacy	7	1.8 (0.7 - 3.6)
	Farming	5	1.3 (0.4 - 2.9)
	Camp school teaching	3	0.8 (0.2 - 2.2)
	Publicity	3	0.8 (0.2 - 2.2)
	Supporting the sick	2	0.5 (0.1 - 1.8)
	Others	3	0.8 (0.2 - 2.2)

5.4 Discussion

Findings from the survey showed health challenges faced by IDPs were generally environmental-related, and the most common health issues were malaria, fever and faecal-oral diseases. Mortality rates were higher among children, and the main reason for deaths was having fallen sick. Diseases were, however, not limited to specific age groups but rather affected all age-groups. A few chronic diseases were reported, and the most common were cardiovascular (high blood pressure) and digestion tract (piles) related, and these conditions were higher in the north-east region. The findings implied that reported health outcomes may be related to locations and camp settings.

Despite the high disease prevalence, healthcare services were not received by all IDPs who had reported ever being sick. Vaccination coverage was very poor as nearly half of the population reported never being vaccinated in their lifetime, and very few vaccinations had been given in the camps. Poor coverage of health services and vaccination implied the IDPs were susceptibility to various illnesses, especially infectious diseases.

To the researcher's knowledge, this was the first study to associate demographic characteristics and utilization of resources with IDP health outcomes in Nigeria. Factors most associated with falling sick included gender, age, long-term illnesses, household size, type of toilets used and its location (distance), and issues with disease-causing vectors; while the duration of stay in the current camp revealed a weak association.

5.4.1 Mortality and Morbidity

Low mortality observed in the study is a known characteristic of post-emergency phases during humanitarian crises.[17] The higher proportion of

death identified among children was also similar to other research.[182,257] The retrospective study by Hershey et al. showed that the primary causes of mortality among camp-based displaced children under-5 years, especially in Africa, were malaria, pneumonia, diarrheal disease, neonatal deaths, and acute malnutrition.[249] The paper also reported other causes of morbidity, which included skin diseases and intestinal worms, similar to findings in this research. Observations in that study were, however, based on camp-level data not individual characteristics; hence, related associations with personal risk factors may not have been explicit.

Deaths from accidents and injuries presented in this research may have been due to delays in receiving adequate treatment, as shown in the publication by Dabkana et al. on the observed pattern of injuries from the Boko Haram crisis.[258] Although the report was based on hospital records and did not capture information on cases not presented at the clinic. Nevertheless, previous studies support the finding, showing that injury-related mortalities were common and exacerbated by a lack of health services and the presence of other complications.[259,260] Consequently, some deaths among IDPs in Nigeria could be prevented if basic first aid measures were available. Similar morbidity and mortality trends, as identified in this study, have been observed in other displacement settings.[33,182,257,261] For example, Connolly et al. stated that diarrhoeal diseases in camp situations accounted for more than 40% deaths in the acute phase of an emergency, and acute respiratory infections were responsible for a large proportion of morbidity.[33] This was evident in a study conducted in Costa Rica that showed respiratory infections represented 63% of all illnesses.[262] Also, a review on respiratory infections in crisis-affected populations, observed high excess morbidity and mortality due to

acute respiratory infections of about 20-35%.[182] In addition, the study by Brooks et al. on malaria among IDPs in Congo reported that 43% of the study population tested positive for malaria, and out of this, 61% were children <5 years of age.[263] The majority of related studies and reviews were however conducted among refugees, not IDPs. One study on IDPs which assessed factors associated with health outcomes in Uganda focused on those 18-years and above.[261] Such age cut-off limits the generalizability of findings.

Overall, several IDPs in this current study experienced multi-morbidity, and this has previously been shown to increase significantly with age.[264,265] Combination of these outcomes with poor health monitoring can lead to re-emergence or development of new diseases and complications from pre-existing conditions.[33,266]

5.4.2 Risk factors associated with poor health status

The univariate analysis conducted in this study showed that nearly all the risk factors considered were associated with a higher likelihood of falling sick. Inconsistent significance of handwashing (not significant in the univariate analysis but significant after adjusting with other factors, *p= 0.04)*, was also observed in other displacement settings.[127,261] One study which assessed factors associated with IDP health status, including personal characteristics and camp resources, showed a negative association between the absence of soap and IDP physical health; thus indicating improper washing increased the likelihood of diarrhoeal diseases.[261]

Previous publications have also presented associations similar to the significant risk factors identified in this study.[178,249,267,268] Roberts et al. stated factors related to poor physical health were being female, absence of soap,

lack of food, water, and medical care.[267] Although, that study did not assess the availability and utilisation of health services in relation to the health outcomes. Another retrospective study showed that proximity to water sources and camp population size were risk factors for malaria, pneumonia and diarrheal diseases.[249] Both articles presented post-incidence studies using secondary data; hence, cases not captured in the records were excluded and findings may be underestimations of the actual figures.

The above observations showed multiple local factors, both demographic and resource factors, had an impact on IDP health outcomes. This has wide-reaching implications such as continuous health deterioration. For example, the long duration of camp stay and large household sizes are both high-risk factors for tuberculosis.[245]

5.4.3 Resource availability and utilization

Similar to findings in this study, associations between resource utilisation and IDPs health status have been reported in several publications.[223,245,261,269] Previous studies show that although most IDPs had access to basic supplies, shelter, and potable water, the main challenges were usually insufficient food, lack of finance and medical care, and personal safety/security.[261,269–271] The study by Kim et al., although sampling only female IDPs, reported the main problem in camps was lack of food.[270] This finding supported the food shortage described in this study, as shown when IDPs reported eating two meals or less per day. Such inadequate nutrition contributed to weakened immunity and consequently, to falling ill or dying.[33] Unfortunately, sourcing for food in displacement conditions is generally challenging; and, as observed in this study, most IDPs either purchased their food, grew it or relied on

humanitarian support (donations).[272,273] An example was illustrated in the study by Singh et al. which assessed nutrition and household food security among IDPs in Kenya.[272] The study revealed that low monthly household income was associated with higher food insecurity.[272] These findings were, however, from a non-random selection of men. As such, more studies assessing family units in displacement settings are essential for understanding the implications associated with poor resource access and nutrition.

In respect to sanitation and hygiene in this research, areas, where IDPs lacked direct access to drinking water sources, implied they were more susceptible to water-borne diseases like diarrhoea due to poor water handling (e.g. purchase from water vendors).[53,232] Furthermore, households that reported having toilets close to the primary sources of drinking water in this study were also likely to experience more faecal-oral diseases as described by Swerdlow et al. who assessed risk factors for cholera among refugees.[232] This assessment evaluated exposures to both food and water, and also conducted laboratory testing of the water sources. The authors identified that drinking water from open sources such as rivers was associated with higher cholera incidence.[232]

Poor waste disposal practices observed in this study likely increased the volume of rodents and disease vectors, especially mosquitoes which are carriers of several disease pathogens.[274] This assumption was supported in other studies which attributed diarrhoea and malaria cases in camps to incomplete water and sanitation provision.[257,275] Although most related studies were based on secondary data because primary studies among displaced populations were usually cross-sectional and unable to confirm causality.

5.4.4 Healthcare management

As most IDPs in this research did not receive adequate professional medical attention, self-diagnosis, misdiagnosis and inappropriate treatments were likely high. As shown in the study carried out in Colombia, less than a third of cases received prescriptions for their self-reported and medically diagnosed health conditions.[276] The study was, however, carried out in an urban area and assessed both IDPs and non-IDPs; therefore, outcomes in rural regions may be even lower. Nevertheless, these factors contribute to late presentation and management of chronic conditions, and delayed awareness of this can lead to disease outbreaks.[36] Hence the need for increased vaccine protection.

Low vaccination coverage in the conflict region, the north-east, before displacement have reportedly been due to poor perception and education.[87,277] However, findings from this study showed most IDPs had developed more positive attitudes towards vaccination. This indicated the IDPs were more receptive to receiving vaccines if offered. Perception changes may have been a result of observed outcomes from vaccine-preventable diseases since arrival at the camps, for example, the deaths of loved ones.[30,278]

Reported high number of child delivery in the study camps was similar to the finding by Kim et al., which showed births by IDP women in Sudan were taken mainly by TBAs or went unattended.[270] These practices contribute to birth complications and high maternal mortality, especially if thesz pregnant women were unvaccinated.[127,279,280] Evidence of this was illustrated in the study by Guthmann et al. where 19 of 45 deaths from Hepatitis E among a displaced population were pregnant women.[127]

In this study, the range of IDP roles in camp management showed evidence of internal camp management processes. Observed involvement in vaccination activities, including planning and coordination, presented opportunities to increase vaccine uptake. This is supported in the study by Habib et al. that showed how the integration of crisis-affected communities in health activities improved vaccination coverage.[281] Although that study focused only on polio vaccine about which there was more awareness. Therefore, the effect of community outreach for other types of vaccines would require further research.

5.5 Strengths and limitations

Getting the required sample representation was a challenge as the IDPs were often not within their households but were often gathered in communal areas or away from the camps in search of food or a source of income. As the questionnaires were verbally translated, some terminology may have been misinterpreted in the process. In addition, the use of only self-reports may have resulted in under-reporting or misclassification of conditions.

The use of a cross-sectional study design and data collection from only one point in time meant it was inappropriate to infer disease causality. Hence, the study focused on estimating the prevalence of health conditions and identifying related risk factors. Allowing for the rapid changes in humanitarian conditions, the outcome data may have changed since the time of data collection. Therefore results need to be interpreted within the study context and time period, and care taken when making generalisations.

Nevertheless, the survey provides important data on the physical health challenges experienced by conflict-affected populations, especially among

IDPs in Nigeria. This evidence is valuable since similar information are usually lacking due to limited accessibility and operational facilities.

5.6 Conclusions

Limited utilisation of adequate health-related resources contributed to higher risks of illness and deprivation among the IDPs. A combination of poor sanitation and hygiene, vaccination and nutrition was associated with an increased vulnerability to several diseases. Considering their displacement status, the IDPs lacked the capacity to efficiently provide for all their basic needs especially healthcare. Hence, the evidence suggests a case for greater provision of humanitarian assistance than that which is currently available.

6 EXPLORATION OF STAKEHOLDER PERCEPTIONS ON IDP MANAGEMENT (QUALITATIVE STUDY)

6.1 Introduction

Research on the lived experiences, perceptions of services offered, and management of displaced populations, especially IDPs, is limited. Related qualitative studies have assessed IDP needs, explored associated social determinants of health, and effects of conflict on health services, most especially maternal healthcare services.[44,282–285] These studies showed that, generally, conflicts limited accessibility to basic resources and weakened healthcare systems. This consequently impacted the health and wellbeing of the affected populations. However, no study has presented insights from both the affected populations and relevant supporting national stakeholders on healthcare management processes in displacement settings, and this is crucial for effective planning and coordination.[13,282]

The qualitative component of this research aimed to explore the opinions, perceptions, and experiences of local and national stakeholders involved in IDP camp management and healthcare service provision. IDP perspectives were also investigated to proffer a balanced view of the healthcare management processes.

Qualitative research techniques are useful for discovering the meaning people give to events, especially in their natural settings.[286,287] These opinions put observations into context and link them with the appropriate conditions, e.g. conflict. For this study, the qualitative component was included to provide

supporting context and explanations for findings from the first two studies (audit and survey).

This chapter, therefore, outlines the methodology adopted for the qualitative component of this research. Results for each participant group were analysed separately and presented individually. The discussion section triangulated the core messages and feedback from each group, and this was also used to describe the overarching perceptions of IDP healthcare services and management procedures.

6.2 Methods

6.2.1 Research design

FGDs and interviews with different stakeholder groups: IDPs, HSPs, CMs, and APMs, were conducted to explore their perceptions of IDP health service provision and management.

FGDs are useful for investigating people's views and understanding collective responses regarding an issue.[288] They are also considered a rapid way of gathering information. While interviews, which are mostly between two people, provide quick access to important facts from carefully selected individuals who likely had relevant information.[288]

Use of FGD data collection technique was selected for the IDPs because it provided a platform to gather data swiftly from several people simultaneously, whilst encouraging group interactions. FGDs also provide insights into collective group experiences and are ideal for exploring attitudes and needs.[286] Hence, the FGDs served as an opportunity to explore the opinions of IDP leadership teams; while one-to-one interviews provided individual

perspectives around IDP management processes from external management delegates.

6.2.2 Stakeholder sampling

A purposive sampling technique was adopted to identify participants for the FGD and interviews. This technique is systematic and non-probabilistic, which ensured sampling was not performed randomly but instead based on specific criteria. Consequently, selected participants represented the population and issues of interest.[193,288]

Given that the present research was primarily focused on IDP management, participants selected were those who either possessed the characteristics relevant to the study aims or had access to the information needed. Hence, participant selection was based on individual roles and responsibilities.

This approach ensured internal homogeneity within each group, as well as external heterogeneity between the different groups. Outline of each participant selection according to the data collection method is described in the following sections.

6.2.2.1 FGD participant selection

Criteria for FGD participant selection was involvement in IDP camp management, administration, and leadership. IDPs who indicated being involved in camp administration and management during the survey were requested to participate in the FGDs. Where the numbers identified during the survey were insufficient, or IDPs declined participation, the CMs nominated other relevant IDPs. CMs also helped verify the eligibility IDPs selected during the survey.

One FGD was planned for each camp, and the intended participant number per group was 6 to 12 IDPs. Generally, FGD numbers can be between 4 to 8,[288] but it is advised to have groups between 5 and 12 participants.[206,289] This is because smaller groups may narrow the observed perceptive, while larger groups can be difficult to manage and can also limit individual opportunities to share insights.

6.2.2.2 One-to-One Interview Selection

6.2.2.2.1 CM selection

CMs were selected to ensure the views of those involved in camp management, which served as a link between the IDPs and APMs, were also captured. CMs were responsible for managing the affairs of a specific camp and were either representative of supporting organisations or individuals appointed by the IDPs.[81] Hence, individuals responsible for the daily running and management of the camps automatically qualified to participate in this section of the study. One CM was considered for each camp, and the maximum number of CMs for the research depended on the total number of sites visited.

6.2.2.2.2 HSP selection

The HSPs were included in this research because of the crucial role they played in administering and managing IDP health services. The role of each HSP varied according to their training, which in turn determined the activities they were allowed to perform.[13] To ensure HSPs from different sub-levels were represented, individuals from each of the following roles were targeted: doctors, nurses/midwives or CHWs. The estimated sample size for each camp was three HSP participants, one from each of the three key roles listed.

6.2.2.2.3 APM selection

National management authorities responsible for IDPs were included to ensure government perspectives were explored. The APMs targeted for this research were representatives from NEMA or SEMA. APM participants were individuals who worked specifically on IDP management. Stratifications based on unique roles were considered, where available. Participant selection was done at the state level, and a minimum of one interview was targeted for each state visited. Therefore the minimum APM participant sample was seven.

6.2.3 Stakeholder interview tools

The uniqueness of each participant group led to the development of different data collection instruments **(see Appendix 6.1 – 6.4)**. Four different data collection guides were developed, one per study group. Each guide was designed using frameworks relevant to the research focus of each group. The data collection format chosen was semi-structured interviews. This approach ensured interactions remained around the core research areas but still allowed flexibility in both questioning and responses provided.[287]

Use of semi-structured interviews allowed interviewers to probe for more detailed responses in a manageable way.[193,290] This method was suitable for the study objective, which aimed to explore subjective meanings participants' ascribed to concepts or events. Using this technique also enhanced the validity and consistency of the feedback, as well as permitted expressions of contrary opinions.[193,198,213] Hence, since the research area is generally understudied, adoption of a semi-structured interview format allowed for varied responses.

The FGD and interview guides were considerably detailed. Participants were, however, not mandated to answer all the questions or restricted to respond in a specific order. Flexibility was allowed in the responses, but interviewers' ensured feedback were relevant to the research focus.

As the FGDs and interviews sought to identify the surrounding conditions and factors that influenced IDP health management, a combination of the different data collection techniques offered a broader outlook around IDP health management processes. These provided a better understanding of how management procedures impacted the health and wellbeing of IDPs.

All FGDs and interviews were designed to last between 60 to 90 minutes and were held in the camp premises or at the participant's office, when necessary.

6.2.3.1 FGD Guide

The purpose of the FGDs was to understand the IDP internal management procedures, perceptions, and challenges. The FGD guide was derived from the "Camp Committee Assessment - A tool for deciding how to work with camp committees",[291] UNHCR Food Distribution Monitoring Checklist.[253] and the "Guidelines for Public Health Promotion in Emergencies".[101]

Text Box 6.1 – Camp Committee Assessment Tool

Camp Committee Assessment Tool

The tool is aimed to assist humanitarian agencies make an assessment of the current structure and role of the committees within the camps. It helps tackle issues of humanitarian organisations accountability to affected-people by using camp committee platforms.

The FGD guide had five sections. The first section covered management committees and their roles. The next two sections enquired about the processes used for the identification of vulnerable groups, camp population management, resource distribution, and communication flow. The last part examined the camp community health, disease prevalence, vaccination activities, morbidity and mortality **(Appendix 6.1)**.

6.2.3.2 CM interview guide

The CM interview guide had six sections and was adapted from the Collective Centre Guidelines[81] and the CMT.[13] The first sections focused on previous camp assessments and resource availability, functionality, and maintenance. Other sections inquired about the disease incidence and health interventions implemented, and the final sections focused on camp leadership and community participation **(Appendix 6.2)**.

6.2.3.3 HSP interview guide

The HSP guide was designed using the WHO EPI module,[292] Refugee Health Guidelines,[17] Interagency Emergency Health Tool Kit,[293] and Health Information System Reference Manual.[294] The adapted interview guide had five sections, which focused on the health services available to IDPs, health management processes, vaccination, record keeping, and community participation **(Appendix 6.3)**.

Text Box 6.2 – Health Information System Reference Manual

Health Information System Reference Manual

Manual describing how data should flow from the point of data collection to the point of analysis and interpretation in emergency settings.

Text Box 6.3 – Interagency Emergency Health Toolkit

Interagency Emergency Health Toolkit

Toolkit showing essential medicines and medical devices required in emergency situations and designed to meet the initial primary health-care needs of a displaced population.

6.2.3.4 APM interview guide

The APM interview guide was developed using only the CMT.[13] The second chapter of the CMT on "Roles and Responsibility" was the main section considered. This chapter outlined the responsibilities of camp management agencies including coordination, monitoring, protection, camp services and partnerships with stakeholders.

The APM interview guide had six sections. The first two sections focused on the management agency's background and IDP-related organisational roles and responsibilities. The next two sections focused on the support and assistance provided to IDPs, and the final sections were on IDP participation and camp assessments **(Appendix 6.4).**

6.2.4 Qualitative data collection

Focus group participation numbers varied between 6 and 10. Eligible participants for the FGDs and interviews were notified at least one day in advance, depending on fieldwork duration per camp. All discussions and interviews were conducted face-to-face on the camp premises by team

supervisors in either English or Hausa languages, and another team member took notes. After the fieldwork phase, a couple of recordings were lost due to technical challenges. However, these interviews were conducted again through telephone conversations. Repeated interviews were reviewed against original notes taken during the first interview to ensure data consistency.

Before starting data collection, participants were informed of the research purpose, expected impact and their right to withdraw from the study at any time. Participants were also notified that the information provided would be kept confidential and they would not be identified personally or linked with the responses. The researcher's contact information was also offered for further inquiries. Before the commencement of interviews, participants also provided personal/signed consents.

To encourage sharing of more information, a mixture of probing techniques were used, especially the 'echo' and 'neutral' probes.[206] Both techniques entailed making a sound, either to clarify what had been said or to indicate active listening, without necessarily agreeing or not with the statements made.

Most participants requested for incentives; however, none had been planned for this research study. In such situations, the groups or individuals were informed the research aimed to gather information that could help identify immediate needs which could be provided later. In some cases, especially the FGDs, lack of incentives resulted in a few individual withdrawal.

A total of eight FGDs and 23 interviews were conducted (nine CMs, seven HSPs, and eight APMs). The median and time range duration for the FGDs and one-to-one interviews was 26 minutes (range: 15-35 minutes) and 31

minutes (range: 16-70 minutes), respectively. **Table 6.1** shows the intended and achieved group/participant sample numbers, and the interview recording times for each participant category. Time duration per individual interaction reflected participants' level of IDP health management awareness. Therefore, the shortest interview durations were with participants who had the least amount of information.

Table 6.1 – Summary of qualitative data collected and time duration

Participant category	Expected sample range	Number achieved	Recording time	Median recording time
IDPs (FDG)	7-14	8	15-35 mins	21mins
Camp managers	7-14	9	23-44 mins	36 mins
Health service providers	7-21	7	21-38 mins	27mins
Policy makers	7-14	8	16-70 mins	33mins

6.2.5 Data analysis

Audio recordings from the FGDs and interviews were transcribed verbatim by two people. This was either by a team supervisor and the researcher or by two supervisors (for recordings conducted in Hausa language). All interviews were transcribed directly to English language. Quality, consistency, and accuracy were verified for each transcript by reviewing them against the audio recordings. For interviews conducted in Hausa, which the researcher was not fluent in, a PhD colleague (AE) fluent in the language helped validate the accuracy of the transcriptions. The qualitative data analysis process was managed using Nvivo 11 software.

Analysis was based on the contextualist thematic approach proposed by Braun and Clarke.[295] This provided the overarching guidance for the thematic analysis technique as outlined in the six stages below. However, generation of

themes followed the step-by-step step coding process, recommended by Boyatiz, for developing data-driven themes.[212] This included determining the study analysis variable and describing the codes with qualifying and exclusion criteria. Summary of the data analysis process is described below.

6.2.5.1.1 Stage 1: Familiarisation with the data

Completed transcripts were compared against the original audio files to ensure accuracy. Transcripts were read several times to facilitate understanding of the content, context, and depth of each data item. Also, field notes and reports collected during the interviews were reviewed to ensure adequate consideration of the study context.

6.2.5.1.2 Stage 2: Generating initial codes

Data for each participant group (FGD, CM, HSP, and APM) were analysed separately, and this was used as the analysis variables. Two transcripts were selected per participant group, and an initial list of codes and patterns for each group was documented. Interesting and meaningful sections of the text identified in the transcripts were used to develop the codes. To ensure consistency, one transcript per participant group was coded separately by one of the researcher's PhD supervisors (PS). The initial lists of codes were discussed, and agreed selections were applied to the rest of the transcripts.

6.2.5.1.3 Stage 3: Searching for themes

Codes and supporting contexts were entered into tables for easy visualisation. Subsequently, these were re-arranged into relevant categories for each participant group. All themes were defined and given qualifying descriptions (i.e. how to know where the theme occurred and how they qualified).

6.2.5.1.4 Stage 4: Reviewing initial themes

All themes identified were assigned a set of sub-themes and related quotes. These were then revised by two other PhD supervisors (ST and RM) to ensure they were relevant, within context, and had the strength to be categorized as themes. After this, the themes and sub-themes were revised until they were concise and showed both homogeneity (meaningful relationship) and heterogeneity (clear distinctions). This process was achieved using the constant-comparison method,[215] which helped identify explanations for the observed patterns and contradictions within the data.

6.2.5.1.5 Stage 5: Defining and naming themes

In this phase, the final sets of themes and subthemes were refined. This provided detailed explanations of what each theme and subtheme represented as well as information captured within the data. Also, the sub-themes ensured the structure and presentation of findings were clear.

6.2.5.1.6 Stage 6: Producing a report

Result write-up was based on participant categories. For each group, the themes and sub-themes were described and supported with appropriate quotes from the transcripts. Each quote was assigned a unique identifier based on the participant group and camp. Where required, participant roles or gender were also presented.

All six stages were followed for each participant group, and the findings were presented separately. Afterwards, the themes and sub-themes from all four groups were reviewed together to identify a pattern, which was presented in the discussion section.

6.3 IDP FGD results

FGDs were conducted in all camps visited except Kyauta camp in Kaduna state, due to violence arising in the area which caused the interview team to evacuate earlier than scheduled. Gender representation varied across the groups, but most participants were males. The final participation sample is presented in **Table 6.2**.

Table 6.2 – Overview of FGD participations

Focus Groups (FG)	State	Camp name	Camp type	Number of participants	Gender
FG1	Borno	Bakassi	Planned	11	Female (5) Male (6)
FG2	FCT	Kuchingoro	Self-settled	5	Female (2) Male (3)
FG3	FCT	Durumi	Self-settled	6	Female (2) Male (4)
FG4	Kano	Gaida	Dispersed	5	Female (2) Male (3)
FG5	Nasarawa	Gurku	Planned	7	Female (3) Male (4)
FG6	Plateau	Stefanos	Transit	5	Female (3) Male (2)
FG7	Taraba	Mullum	Dispersed	5	Female (2) Male (3)
FG8	Taraba	Gullum	Transit	5	Female (2) Male (3)
NA	Kaduna	Kyauta	Dispersed	Not Done	NA

Five key themes which described the IDPs' perspectives on camp and health management were identified during the FGDs **(Table 6.3).** The dominant themes were related to the camp environment and location; camp administrative processes including planning and communication procedures for both internal and external interactions; basic supply and management of resources; and overall perceptions of IDP health outcomes, management, and availability of services. The results provide insights into the approaches used by IDPs to cope with and manage their situations. Key findings and supporting extracts are elaborated upon within each of the themes and related sub-themes.

Table 6.3 – Summary of FGD themes and subthemes

Theme	Subthemes
IDP perception of their settlement conditions	
IDP administration and communication process	IDP leadership and planning IDP perceptions of resource provision IDP information and communication management protocol
IDP resources and management	IDP resource and facility management techniques IDP approaches to general camp management
IDP health issues	Primary IDP health challenges Most vulnerable IDP groups IDP personal health management
IDP perceptions of available health services	Availability of basic health services for IDPs IDP health prevention and communication mechanisms IDP rationale f traditional medication

6.3.1 Theme 1 – IDP perception of their settlement conditions

This theme describes the IDPs' opinion of the national government with respect to their settlement locations and the conditions of their living environment.

The majority of IDPs were of the opinion the national government had not been supportive of them. Most humanitarian assistance had come from individuals and other groups, such as local charitable groups or NGOs. This was particularly obvious in informal camps.

> *…government has not given us anything only individuals and groups… We sleep everywhere, some sleeps on mat, floor or mattress, since we have left our homes –* ***Male, FG4***

Most camps were not official sites and lacked external support. IDPs in such locations expressed that this had an influence on the physical and environmental conditions of the camp. They indicated it contributed to the camps lacking several resources, including shelter. The IDPs reported this resulted in managing the camps solely at their personal discretion. However, they still actively solicited for government support.

> *Like here government has not recognized it as a standard camp, so we need government intervention to provide security, water supply etc.… we just work here according to our knowledge…* ***– Male, FG8***

6.3.2 Theme 2 – IDP administration and communication process

This theme describes the management and communication technique used by the IDPs to coordinate and disseminate information internally and when interacting with external groups or organisations. Several sub-themes related to leadership, planning, resource provision and communication protocol were identified, and each will be discussed in turn.

6.3.2.1 IDP leadership and planning

Most camps had an established IDP leadership team, known as IDP camp committees. These committees were responsible for coordinating and representing all IDP residents. Sizes of the committees ranged between 5 and 15 members and included males and females. However, gender representations were often uneven, with fewer female members. This disproportionate representation reflected the patriarchal culture of the country. As a result, management of feminine-related issues in the camps were not always addressed effectively. One male IDP participant considered affairs

related to women as being “stressful”. There wa, however, a desire among female IDPs to be more involved in leadership roles.

> *When we have a meeting we mainly deal with the men. You know there is always stress handling women so when we share things we only do so to the men and they in turn will take it home. But if you have a meeting with women it takes a long time to finish. –* ***Male, FG7***

> *it's always good to have a woman involved in the meeting because she understands what the women are going through and the woman must be respected too …I want them (camp leaders) to involve the women in the dealings of the camp –* ***Female, FG7***

The selection of committee members was mostly determined by two key factors: Local Government Area (LGA) of origin and education. LGAs represented the administrative division of states in the country. Hence, using LGAs as one selection criteria followed the typical national management and administration protocol. For the LGA selection approach, the number of displaced LGAs represented was used to stratify camp leadership positions. Education-based selection, on the other hand, considered the education level of specific potential leaders. The education approach was used to ensure selected leaders could communicate and advocate effectively on behalf of the camp residents. Adoption of either approach varied, but most camps used both selection criteria. Nonetheless, in the formal camps, all locations had never had government or external officials involved in camp committee meetings.

> *(Selection is) based on how we are involved in the things they do in the camp and because some of us go to school a little bit so it helps them select us. –* ***FG2***

Most selected committee members had specific roles and responsibilities; examples of such roles included chairman, secretary, and sanitation officer. This process displayed a level of systematic coordination within the camps. In committees where females were represented, issues related to women, children and sanitation were commonly assigned to them.

> *Anything that has to do about women and children they (women among the leadership) are the ones that handles it… we give the women (items) to share and we just supervise them. –* ***FG4***

A few camps had no standard committee and reasons given included the widespread and distances between household shelters. As such, it was assumed that having committees would be ineffective, as was the case in Gaida camp. Another reason presented was being unaware of the value of such committees in the camps.

> *Really the way we set up this camp we only have this 12 representatives just only to share items when it is brought to us, we don't have any other committee. –* ***FG7***

6.3.2.2 IDP perceptions of resource provision

Like in all displacement conditions, the most common resources needed by the IDPs were essential items such as water, food, and shelter. Most camps had little or no external support and where external assistance were accessible, resources were sometimes provided through multiple sources. These included donations from individuals, local institutions and international organisations, for example, the United Nations Children's Emergency Fund (UNICEF). Despite the involvement of multiple providers, supplies were still inconsistent, insufficient and unreliable. The only resource provided to everyone in most camps were mosquito nets. Individuals and groups with no

affiliation to the government or humanitarian organisations, mostly visited and donated items to the camps during festive seasons including religious celebrations.

> *UNICEF give us water now, before it was Red Cross…. The food NEMA provides is not enough for us…the big sickness I think is hunger. The food they eat is not enough, so when an illness attack, if you give the child medicine it will not work. If you eat well and take medicine, whatever illness that comes will not hold you. – **FG1***

When asked about IDP involvement in supportive intervention programs, most IDPs across all camps were of the opinion that the government and other organisations were meant to be responsible for designing and executing such activities. However, in some camps where interventions had been provided, the IDPs indicated they were sometimes involved in programme design, coordination of IDP residents and occasionally during the implementation process as well. The main activity IDPs were most often engaged in was resource distribution.

> *(Designing programs are) normally done by SEMA or Red Cross Society at time they call us. When they bring it they hand over to us so we can design a way to share it. So it is in two ways: others are done by SEMA and Red Cross others are done by… they hand over to us. – **FG8***

6.3.2.3 IDP information and communication management protocol

The majority of camps received information on issues both inside and outside the camp, such as the status of conflicts and activities of soldiers in their hometowns. However, there were no formal communication processes across all the camps. IDP leaders acted as communication links between external bodies and IDP residents. Some camps also had a specific person responsible for disseminating acquired information to all IDP residents, such

as the news from their homes of displacement and public notice of the arrival of visitors to the camps. Most information received by leaders was from non-validated sources. These included phone conversations with people still in the areas of conflict, informal conversations with visitors or camp officials, and stopping at different gatherings in surrounding communities to listen to discussions. The use of radios was the only means of getting wider information, and the IDPs requested for more radios to be provided.

> *If we did not get (information), we go to the camp chairman, to get whatever information we need in the camp… Radio is better to access information. –* ***FG1***

The most common complaints among the IDPs were related to sickness, food, fights, and theft. These issues were handled in similar ways across all camps. Complaints were first reported to IDP leader representatives, and if unresolved, the complaints were forwarded to the IDP Camp Chairman. Depending on the nature of the problem, it could be escalated to the administrative organisation managing the camp or to the police if the matter was related to security and theft. Complaints about general camp conditions were directed to the organisation managing the camp. However, this approach was only actively practised in the formal camps.

> *So when we have complain, we carry the complaint between members of the committee of the camp; and the committee of the camp, also if it is above them, they carry it to the…Chief –* ***FG3***

Close communal relationships had been formed among the IDPs, and they thrived to avoid anyone feeling totally isolated. In some camps, individuals experiencing undisclosed personal challenges had someone close to them who would inform the committee. In response, the committees intervened by

helping within their capacity. The most communal assistance required was related to food and access to healthcare, especially for the payment of transportation and medication.

> *…there are some close relatives…say they know that somebody has a problem and they don't want to reveal it… that close relative will come and let us know... through that person we will address it. – **FG6***

6.3.3 Theme 3 – IDP resources and management

This theme presents the feedback given on the extent to which basic resources were provided to the IDPs. The subthemes include details about the suppliers of the resources, as well as priorities and strategies considered by during the distribution phase.

6.3.3.1 IDP resource and facility management techniques

Access to food, water, and hygiene resources were expressed as the most challenging, and the IDPs stated they had sent out multiple pleas to the government for support. In locations with no access to direct water sources, the IDPs often travelled far to get water from neighbouring non-IDP communities and often faced long waiting times. The waiting duration was sometimes prolonged because IDPs had to wait for local community residents to collect water before they could. All camps reported available resources were insufficient for the IDP population and, where donations were provided, they had to wait long periods in between supplies. This delay affected rationing and sometimes resulted in door-to-door begging in a few camps. To mitigate the lack of food supply, some IDP leaders advised their camp residents to find means of generating an income, for instance, farming, gathering and selling firewood.

> *…for water we have always complained to government, because we only have 1 borehole for the owners of the community… we will wait for the community owners to fetch (water) first before we go to fetch… for food I advise people to go into the bush to fetch firewood, we sell the firewood to buy food stuffs like guinea corn which we eat, because if we don't we will die of hunger. – **FG7***

Three approaches were commonly used to distribute available resources. These were food quantity provided, number of households (shelters) and family size (number of people in one household). In some camps, specific food portions were used to ensure a fair distribution of food. A list of resident information including household sizes was sometimes used to guide the process. Although these approaches were more common in the formal camps, where food supply was based on standard management protocol and rations.

> *When they bring food, we will go and collect it ourselves…We get food supply every month, so if your family members are between 7-10 they will give you one bag of rice, one packet of Maggi and four litres of oil... You just have to manage it … if they bring food in the camp, it is to last for 20 days, but the camp authority will allow it to last for 30 days instead. Then we will have to go from house to house to ask for some food, or we buy... – **FG1***

Most camps had limited, and often at times, poorly organised, sanitation with no accessible or gender-separated toilets. Some camps had no toilets at all and either shared with neighbouring communities or defecated in nearby outdoor bushes. Where toilets existed, attempts were made in most camps to manage them, and these were usually the responsibilities of women. Female FGD participants also stated they checked and ensured children washed their hands after using the toilets. Solid waste was poorly disposed of in all the camps, and adequate waste management facilities were lacking. Only the

government formal camp (Bakassi camp) stated garbage trucks sometimes came to clear solid waste piles.

> *There is a place where we gather our refuse to burn but some we'll just put it in the gutter and when it rains it will pack them, while some we will just dispose it anywhere… (to improve sanitation) I will let everyone in the camp to try and construct their own toilet themselves so that the surrounding will be hygienic for everyone. –* ***FG7***

6.3.3.2 IDP approaches to general camp management

None of the focus groups, which comprised only of IDP leaders, reported having a standardised process of managing the camps. Each camp committee adopted its unique method for managing camp affairs and this included tracking IDP population numbers by recording them by households, and this information was usually used to determine resource allocation. Most camps had set-up a resource distribution team and, in some cases, a health support team as well.

Difference in overall camp management processes varied by camp status. Formal camps, which were planned settlements run by the government or NGOs, appeared to have more standardised management processes compared to informal camps. These camps also had clear reporting chains for decision making and managing complaints presented by IDPs; therefore, high priority needs and problems were addressed much quicker.

> *…they use to come and tell the secretary and the chairman of the camp. So, if we can be able to address the issue, we address it. If the problem is beyond our understanding, we call the Oga, the owner of the camp (NGO representative), and he will intervene. –* ***FG5***

A few unconventional management techniques had been adopted in some camps for different issues; including water usage, treatment, and waste management, especially in the informal camps. For example, the use of bleach to treat drinking water and reliance on rainfall to clear out the solid wastes deposited in gutters, as previously described.

> *We fetch the water from borehole for drinking and the water from well is what we use to wash clothes and other things. –* ***FG6***

6.3.4 Theme 4 – IDP health issues

This theme describes the views of IDPs on the factors that affect their health. It outlines the outcomes experienced as a result of these influencing factors, related health challenges and common illnesses. Also, it elaborates on their perceptions about the most vulnerable groups and self-management approaches adopted in the camps.

6.3.4.1 Primary IDP health challenges

Health challenges expressed as being most common were headaches, eye infections, diarrhoea, fever, typhoid, and malaria. The IDPs associated some diseases with the high volume of rodents and disease-causing vectors present in the camp premises, including mosquitoes, snakes and scorpions. Bites from these vectors were stated to have increased disease incidence and mortality.

> *…the mosquitoes are everywhere. My children suffer from malaria, diarrhoea and vomiting. My children have been sick for some time now due to malaria. –* ***FG8***

Some FGDs reported the most common long-term illnesses were associated with trauma, stress and poor nutrition; for example, high blood pressure and stomach ulcers. Consequently, it was unsurprising to observe that the biggest

challenge expressed in all camps was hunger. The IDPs declared that the lack of sufficient food affected their overall health status and speculated that it might have caused a few deaths.

> *Six deaths in the past three months, but early in the year when we came there was no death only illness. But I don't know if the illnesses causes the death…The food NEMA/SEMA provides is not enough for us, maybe it is hunger, and the big sickness I think is hunger**….** (What brings this death?) It is only hunger, nothing else**. – FG1***

6.3.4.2 Most vulnerable IDP groups

Although the health of everyone was reported to be somewhat affected, when asked about what groups were most susceptible, typical responses were "women and children". Reasons for this included the opinion that women and children were more prone to falling ill, especially during childbirth for mothers and at a younger age for children.

> *…children and women are the most (vulnerable), and occurred death… because since I came here I have not fallen sick but my wife and son have been sick more than five times**. – FG1***

In addition, the highest mortality rates were reported to have been among women and children. Another factor described to contribute to these vulnerabilities was the inability of women and children to cater for themselves, especially towards sourcing for food. This was indicated to be most common among unaccompanied children, especially those who were either orphaned by the crisis or had no parents or personal guardians in the camp. It was generally implied that not having a mature man in a household increased the health risk of women and children.

*Females (are most vulnerable) because it is hard for them to go somewhere to go find something to eat**…** children too, because when their parents die, they can't help themselves – **FG2***

6.3.4.3 IDP personal health management

Procedures adopted by the IDPs to manage their health issues were similar across all the camps. Sick people were taken to see a medical doctor who would prescribe and/or provide medications. In most cases, these services required direct payments from the IDPs. Hence, alternative treatments including local traditional remedies were used when health personnel were unavailable or financial requirements for medications exceeded the IDPs budget.

*…we drink it (herbal medicine), but we don't get it, easily. If it is for typhoid or malaria we use it, but we don't get it. Although we first visit the doctor… – **FG1***

In some camps, financial contributions were made to support each other but most IDPs resorted to other options within their budget. These included the use of herbs and obtaining medicines from street vendors, which at most times were substandard and ineffective. Overall lack of finances influenced individual healthcare access and prioritisation.

*We go to the health centre… But no money. So instead of going for at least full treatment, they rather go to a chemist to get drugs of 50 naira (£0.11) because they don't have money. – **FG8***

6.3.5 Theme 5 – IDP perceptions of available health services

This theme explores the IDPs' opinions of the healthcare services available to them, including vaccination. It elaborates on their perceptions of the management approaches implemented by and for the IDPs; and how they

interacted with the available healthcare services. It also presents further details on alternative healthcare methods used to manage their health conditions, especially on decisions related to traditional medication.

6.3.5.1 Availability of basic health services for IDPs

The nearest healthcare facilities to most camps were health posts or primary healthcare centres (PHC), which offered the basic level of care in the country. These health facilities were however either not operational, lacked basic medical resources and staff, or were permanently closed. Medications accessible to IDPs were either donated by organisations or directly purchased over the counter at local pharmacies. Generally, donated drugs were deposited at health facilities accessed by IDPs. However, in camps with no access to health facilities, drugs were given to IDP leaders.

> *…sometimes the NGO used to process some drugs and some organisations they used to help us with some drugs but as for now, we don't have a drug now. The clinic is even closed, it's empty. The drugs that have been brought by the NGO is has already finished. –* ***FG5***

Accessible and functional health facilities treated only minor issues such as mild fever, while more complex issues were sent to hospitals (secondary level care), and sometimes to a federal hospital (tertiary care). These hospitals were mostly located at much farther distances from the camps and required faster means of transportation or extremely long walks. The far distances and financial requirements needed to obtain transportation discouraged some IDPs from seeking further healthcare.

> *…minor ones we use to attend it here. If it is so complex we take to that hospital, even in that hospital, they don't have medical personnel, the*

*consultants sometimes will refer us if it is serious to FMC (Federal Medical Centre) – **FG5***

6.3.5.2 IDP health prevention and communication mechanisms

Most camps stated that vaccinations had been done on the camp premises, but mainly for women and children. IDP involvement during vaccination campaign activities varied. Moreover, these were mostly limited to sharing household information with the healthcare staff administering the vaccines. Some IDPs liaised directly with local health centres but were less involved during vaccination days. In informal settings, IDPs stated that the healthcare staff did not necessarily focus on IDPs individually, rather they went door-to-door, checked the household residents and administered the vaccines.

*No, they have not (come to the camp), they only come from house to house for immunisation not campaign – **FG4***

Most IDPs indicated vaccination communication in the camp was poor. The majority did not know the type of vaccines received or what organisations had administered them. Furthermore, some participants stated the only way of knowing who had been vaccinated was by word-of-mouth.

*She will not know which one (vaccine)… but they used to give TT (tetanus toxoid vaccine) and then …pentavalent – **FG5***

Overall opinion on the advantages of vaccination was weak. In some camps, vaccination was agreed to be effective in preventing illnesses in children, but personal experiences had led a few IDPs to doubt the certainty of such benefits. For instance, a father expressed how his son still got sick even after being vaccinated and receiving medication.

*Truly what the polio people do I can't say if there is a need for it or not, or good or not. Because some time ago my son was sick with typhoid, and he was given medicine but it did not work. Then I had to buy with my money, before it worked. Therefore, I can't say if it works or not. – **FG1***

Upon asking for possible ways to improve the overall vaccination process, some IDPs suggested that being notified on vaccination schedules in advance would be helpful. This demonstrated the need for improved vaccine communication.

*Yes, there are different ways to improve their services first of all they will need to employ more health workers, those going from house to house should ensure every member of the household was given the vaccines… we have some people that still don't believe in vaccine we have to beg them to accept, they should let us know about it so we can tell the elders to be able to talk to them… We need every type of vaccines here, because they are all important especially hepatitis. Because many of them they have liver problem – **FG8***

6.3.5.3 IDP rationale for traditional medication

Contrary to general perception on the use of alternative remedies, especially in the Sub-Saharan African region, traditional medication was not common or readily adopted in most camps. Some IDPs mentioned herbal remedies were usually taken for typhoid, malaria and to ward off snakes. However, in most cases, traditional medicines were considered after consulting with doctors and often seen as alternatives when they could not afford or access formal health services.

*Although we first visit the doctor, but if he doesn't have the medicine, we find alternative herbal medicine. – **FG1***

6.4 CM Interview results

The CM interviews aimed to explore their roles and perceptions of IDP camp management processes. **Table 6.4** presents an overview of the nine CM participants, one from each camp. All CMs interviewed were males. The IDP chairmen were camp committee leaders selected by IDPs to manage camp affairs. In informal camps, these IDP chairmen played dual roles as CMs. Camp coordinators and directors where CMs in planned camps. These were individuals assigned by external organisations to oversee the camps. The title of each role generally depended on the group or organisation's nomenclature.

Table 6.4 – Overview of CM participants

CM	State	Camp Name	Camp Type (Establishment Organisation)	Participant
CM1	Borno	Bakassi	Planned, Government	Camp Coordinator, NEMA
CM2	FCT	Kuchingoro	Self-settled, Informal	IDP Chairman
CM3	FCT	Durumi	Self-settled, Informal	IDP Chairman
CM4	Kaduna	Kyauta	Dispersed, Informal	IDP Chairman
CM5	Kano	Gaida	Dispersed, Informal	IDP Chairman
CM6	Nasarawa	Gurku	Planned, NGO (Mission 21)	IDP Chairman
CM7	Plateau	Stefanos	Transit, NGO (Stefanos Fundation)	Camp Director, NGO
CM8	Taraba	Mullum	Dispersed, Informal	IDP Chairman
CM9	Taraba	Gulum	Transit, Informal	IDP Chairman

Table 6.5 shows a summary of the themes and sub-themes identified from these interviews. Five key themes emerged including perceptions of camp administration, condition, communication and resource management, as well as healthcare. Although the opinions presented were from an individual point of view, it reflected the CMs management processes in each domain. As such, the following sections present details on the daily camp management procedures, with their accompanying quotes.

Table 6.5 – Summary of IDP CM themes and subthemes

Theme	Subthemes
CM perspective on camp administration and leadership	IDP registration protocol CM engagement in internal and external camp leadership CM camp coordination and management approach Camp-level decision-making processes
CM perception of IDP camp conditions	Camp location and population characteristics CM opinions on the impact of camp conditions
CM perspective on camp resource availability and provision	Camp needs assessment activities CM review of camp facilities CM approaches to resource distribution
CM communication strategies	Modes of communication on camps CM camp monitoring protocol
CM perceptions of IDP healthcare	CM opinion of IDP health outcomes CM perception of healthcare service availability CM description of disease outbreak management CM insight into IDP healthcare management partnerships

6.4.1 Theme 1 – CM perspective on camp administration and leadership

This theme describes the camp administrative processes, leadership, and management techniques used by CMs. The administration component included views on individual registration, camp visits, and monitoring. The theme also provides additional details on the camp leadership structure, meeting plans, IDP involvement in decision making and prioritisation approaches.

6.4.1.1 IDP registration protocol

Generally, the CMs knew the identity of most IDP camp residents. But all camps had no systematic or formal procedure for capturing individual information. Some CMs stated that at the early stages of the crisis, they had a

standard registration process which had been discontinued at the time of this study (about 2 to 5 years post-displacement, depending on the location).

> *IDPs (were) registered immediately they arrive…. when we started... we actually had ID cards for them… But now we don't have that…. We don't follow that process any longer. –* ***CM7***

All camps had different proxy registration processes, but the most common was family level registration, which captured records of people at a group or household levels. Information collected during registration included basic demographic data, for instance, age, gender, and marital status. Also, some camps collected information on how the IDPs discovered the camp and pre-existing personal issues, such as individual health problems. Collated information was used for various purposes but particularly as a means to identify true IDPs, during internal communication within the camps, guidance for resource distribution, and shared with visiting officials and donors. The household counting system did not always take into account age groups or gender-specific requirements.

> *… We ask them who directed them here? Where they came from? What is the problem? … We use it to know exactly the people that has the problem… so some will not claim they are IDP's... So we allow them to live in the camp. –* ***CM2***

6.4.1.2 CM engagement in internal and external camp leadership

The physical presence of the CMs on camps varied by their role and camp status. Camps managed only by IDPs (informal camps) had access to the CMs at all times since they also lived in the camps. However, in the formal camps, which were run by organisation-assigned administrators or coordinators, CMs did not reside in the camps. In such cases, the CMs visited

daily or only during emergencies such as when they were informed of suspicions of impending conflict and violence or a reported death, and if they were unavailable, they assigned someone to visit on their behalf.

> *…visit every day… If I am not around, I have other assistant staff… we are in an emergency case, anything can happen. That is why we normally visit the camp daily. We have our office there. –* ***NEMA Camp Coordinator, CM1***

Although informal IDP-run camps had direct access to the CMs, accessibility was also influenced by the distance between households, especially in dispersed locations, as was the case in Kyauta camp where households were scattered across a wider land span. Here, the CMs endeavoured to go around each section of the camp within a time interval of 2 to 3 days.

Camp committees, which consisted of only IDPs, also worked with the CMs. These committee members were primarily selected by the IDP residents and assigned roles. However, in the formal camps, when making leadership selections, final approvals were sought from authorities overseeing the camps.

> *…we have the CM, we have the camp liaison officers 1 and 2, who are the ones responsible for sharing. Now sometimes I will want to share, they help me know how to do the sharing… so, they are also involved. They are like the voice of the people. Like the mobilizer, they are the mouth piece of the people. –* ***NGO Camp Administrator, CM7***

6.4.1.3 CM camp coordination and management approach

Most CMs did not use, nor were they aware of any camp management guidelines. The CM in the government-run camp (Bakassi camp), was the only one who mentioned a standard guideline, the Camp Management Toolkit (CMT). While other CMs did not know any guide documents. Absence of

guidelines showed in the gaps in knowledge around health procedures required for disease prevention, monitoring and treatment among a displaced population. Overall, most CMs did not feel they should be responsible for the management details of the camps. Consequently, the CMs mostly reactively attended to issues, when problems arose, especially in the IDP-run camps.

> *No (standard guideline and protocols for managing the camp) …The reason why we are not keeping such kind of records is because the responsible organisation to do this Red Cross and SEMA… We run it (the camp) anyhow. –* ***CM9***

Meetings were often planned with the entire IDP resident population, on a monthly basis. Although these meetings were to be held monthly, they were often influenced by weather conditions and circumstantial seasons. For example, in rainy seasons, the main farming periods, the frequency of meetings reduced as most IDPs went to work on their farms. On rare occasions, for instance, during seasons of high disease incidence or outbreak threats, more meetings were held with the intention of stopping the spread. The PROs (Public Relation Officers) or equivalent, depending on the leadership structure in each camp, was responsible for the dissemination of information to the entire camp population such as meeting reminders and outbreak management plans.

> *We have PROs who goes around to disseminate information and we meet once in a month… We have phone number, we call people together, like each leaders of the location we meet and discuss –* ***CM8***

Management meetings in some camps were sometimes guided by an agenda developed by either the CM or a designated leader. But the schedules were not always followed through and most times did not include health-related

topics. Meeting proceedings in a few camps were on occasion documented and kept by the CM. These documentation processes showed some level of education among the committee members, thus presenting supporting evidence to the point about education being a leadership selection criterion.

Although most camps had personalised management processes, a few informal camps indicated it was the government's responsibility to set up management structures. In terms of health matters, they were of the opinion the responsibility was split between the national government and some international NGOs. One IDP CM affirmed the provision of such support would significantly improve the IDPs sense of worth as citizens of the country.

> *If the government can support the way the NGOs are coming, if they can render more support and partner with the NGOs, I think we in this camp will know that "yes, we are being cared for in this camp". We will know that we are not left behind and we are part of this country. –* ***CM2***

6.4.1.4 Camp-level decision-making processes

There were different decision-making procedures and stages adopted by the CMs. The approach used depended on certain factors, which included the topic of discussion, importance or sensitivity of the issue, how quickly a decision was required, camp status and location type.

In most camps, the general camp population was often included in all decision-making processes. IDP public engagements were achieved by either holding open meetings or through group representations during decision-making sessions with committee leaders. For instance, a female committee member who represent all female IDPs. These representatives were

responsible for cascading information to the groups and afterwards presenting feedback to the leadership team.

> *… women they have their own peculiar issues, which are different from men... the female leader tells us what they need. –* ***CM1***

Public involvement was stated to give IDPs more ownership of camp activities. Some CMs indicated that, although general IDP public involvement was a good and acceptable practice, the major drawback was it often took longer time to arrive at decisions. For example, decisions related to security issues, such as theft, needed to be handled more sensitively; therefore, these were often handled between the committee members. This approach was more efficient compared to the most common food distribution decisions which were conducted in open meetings and delayed the distribution process.

> *…items that we are going to distribute we used to involve them in most of the distributing... You know we have five local governments... We used to strategise together with each of them –* ***CM1***

Committee level decision-making, although much quicker, was not achievable in camps with no structured committees and in dispersed camp locations where representatives lived farther apart and rarely met face-to-face. Most dispersed camp leaders contacted each other over the phone and this incurred phone call costs. Hence, for specific issues, CMs made the final decisions alone; although this was never the case in the formal camps. All decisions in formal camps were either taken at a committee or public level.

> *…as a camp I think it's the chairman and the secretary that determine how to share… I can make decision for all. For everything... We still come together and deliberate, find out, everybody make suggestion and then we will know take the final decision on the matter. –* ***CM2***

Another decision-making stage, not practised in the informal camps, was the referral of highly challenging issues to management authorities, for example, situations related to suspected violence and disease outbreaks.

> *...we normally involve the IDPs so that they will have ownership… it's an unanimous decision based on the majority. When any situation overwhelms us at the camp level we refer it to our zonal office. –* ***CM1***

6.4.2 Theme 2 – CM perception of IDP camp conditions

This theme explores the camp location description from a CM's perspective. It included the camp's recognition status and factors CMs sensed the IDPs considered before selecting a specific area to settle and set-up camp.

6.4.2.1 Camp location and population characteristics

Considering the majority of camps were not government approved or directly supported by specific external organisations, CMs indicated that these sites were technically not considered camps. Although Gurku camp was reported to be a planned site in the audit **(see Section 4.3)**, it started as a self-settled camp before being recognised by the government and later adopted by an NGO who offered administrative support. However, government staff did not visit often, and the IDP chairman generally managed the camp. Consequently, the IDPs often considered themselves as being in an informal camp too.

> *We just came to this site. It was the community that asked us to stay before the government later knew that we were here. –* ***CM6***

Most informal CMs had made efforts to gain formal camp recognition status or support from the government. This request had mostly been either ignored or rejected with no clear reasons.

> *…within the area we have no single camp here… we write for the SEMA and the NEMA, up to now, over two years, no response up to date –* ***CM4***

Lack of support from external organisations and feedback from the government increased the frustration among the IDP leaders. In the country's capital (FCT), which had a high influx of IDPs, the IDP chairman who acted in the capacity of a CM explained they had been told by the government to evacuate the area since no government approval had been given for their settlement. However, the IDPs refused to relocate but remained firm, insistent and determined to stay where they had settled.

> *…they called us for a meeting… they told us the federal government didn't allow them to build any camp in the FCT, so we should go back to our state… we told them they did not bring us here and they are not the ones who gave us this place to stay here… they're not the one who is feeding us… so they should just leave us alone. –* ***CM3***

Before being displaced, the main means of livelihood among the IDPs was farming. This practice continued during the displacement period. As a result, the availability of land for farming was an important factor in deciding where to settle. Although local residents still used most land spaces chosen by the IDPs, compromises were made. For example, in exchange for farming on the lands, IDPs often worked for the landowners. One CM stated the IDPs just "tolerated" whatever the original landowners used the surrounding land for, even if it was contrary to their own interest.

> *… because of the farmland space around this area, we came here so that we can farm…Some people do rear pigs, which belong to the original owners of the area, not people in the camp so there is nothing we can do about it, other than to tolerate it –* ***CM8***

6.4.2.2 CM opinions on the impact of camp conditions

Overall access to, quality and supply of, resources for IDPs were major challenges. The CMs stated the resources in most shortage were water, food and sanitation facilities. Access to water, especially clean drinking water, was a common challenge for the entire country and known to be worst in the northern region. The northern part of the country is the hottest and driest with temperatures regularly exceeding 40ºc.

Amongst the camps, some communal boreholes existed close by, but the distribution and proportion of borehole to population size, as well as the distance between the boreholes and areas of residents varied. Consequently, alternate sources were sometimes used, for example, rivers, lakes, and buying from water vendors. On rare occasions where the IDPs had their own borehole, water collected was also sold to generate maintenance cost.

> *Before we are using the… iron to draw water but somebody come and constructed (borehole and)… put the generator. We are using generator to pump the water…. every jerry can you bring you pay 10 naira (£0.02) to maintain the generator. –* ***CM3***

In some camps, water access challenges were often more complicated. Some camps had no designated water source and lacked the resources to construct boreholes, so shared water outlets with local residents. Sharing water sources with these local communities presented complications in terms of ownership. In addition to not having access, water obtained was often of poor quality, especially when sourced from open waters such as rivers and wells. Furthermore, in most locations, the availability of other facilities, including educational facilities was also poor.

There is a school but it is based on their setup, the NGOs and the other well-meaning Nigerians, but the school is not a standard school… they don't follow the main curriculum. – ***CM2***

On health matters, most CMs stated IDPs were reasonably aware of the main diseases which affected them such as malaria, but resources required to manage these issues, for example, skilled health staff and affordable treatment were limited.

Health challenges like malaria and diarrhoea were specified to be mainly associated with the poor environmental conditions, including the presence of stagnant water close to household shelters and absence of sanitation facilities. To tackle these challenges, some CMs advised camp residents to use other alternative measures, most of which were unorthodox and not conventionally healthy, for instance, using bleach for drinking water purification.

We only check (water) sometimes if you see any moving thing we put bleach and allow the water to settle before drinking. – ***CM5***

6.4.3 Theme 3 – CM perspective on camp resource availability and provision

This theme explores the approaches used for identification, availability, management, and distribution of required resources. It outlines the CMs views on types of assessments carried out, how IDP needs were identified, and how the resources provided were distributed.

6.4.3.1 Camp needs assessment activities

Need assessments, including situation and health assessments, had not been conducted in most camps. Although the three assessments were similar, each

had its own distinctive relevance. In the context of displacement, needs assessments were required to identify essential resources that were in demand, for example, food, water, and shelter. Situation assessments, on the other hand, were required to understand the current conditions and also to inform next steps for a needs assessment, for instance setting intervention objectives. An example of a situation assessment indicator could be population stratification by age, gender, and most vulnerable groups. Finally, health assessments generally encompassed the fundamentals of both needs and situation assessments, but strictly focused on health-related issues. In most cases, situation assessments were done more frequently than needs or health assessments. Largely, all three assessments were means of identifying what the IDPs required for optimal health and wellbeing.

Feedback from the CMs showed the type of assessments, frequency and depth varied by camp types. Formal camps had more assessments carried out than informal camps. Most informal camp CMs stated no assessments had ever been conducted in their current locations, while a few stated either a situation and/or needs assessment had been carried out in the early days of their arrival, by either the government and/or NGOs. However, in most cases, no feedback report had been presented to the CMs nor all identified needed resources provided to the IDPs.

> *We have not gotten any assessment from the government, whether state SEMA, or national emergency up to two years now… But two years ago, I am a witness that NEMA has given assessment for the other area but this area, only here, we are not getting. –* ***CM4***

Across all the camps, regardless of status, health assessments were the least reported. The CMs stated that IDP health needs were primarily determined by

seasonal variations, predominant disease periods and possible outbreak indications. Although, the most pressing individual needs reported in the camps were, however, not directly linked to health but related to food and finance.

> *The only problem in this camp right now is food… what we hear every day, when we interact with each other our basic needs are feeding, rent and children's education –* ***CM5***

6.4.3.2 CM review of camp facilities

The issue of limited availability of resource facilities was reiterated by all CMs, especially with respect to sanitation and hygiene. Most water sources available to the IDPs had not been tested or treated, and some were not protected, for example, rivers and wells. Only the Bakassi camp reported having hand-washing facilities, but these facilities were not functional at the time of this study. There were reports of limited availability of soap, which made proper handwashing practices more difficult.

> *…we have one river down there…its gutter o! But people are using it to wash their cloths –* ***CM3***

Due to non-standardized and unregulated management, most pledges by organisations or individuals to offer support and provide certain services or resource to the IDPs, especially in informal camps, went unfulfilled.

> *All this is supposed to be done by World Health Organisation… (but) World Health Organisation are not coming here. Even UNICEF since last year, UNICEF did not come back again. –* ***CM9***

6.4.3.3 CM approaches to resource distribution

Distribution processes for available resources, such as food and protective materials like bed nets, varied across the camps but usually started with the IDP leaders as the first point of contact. The leaders directly received whatever resources were brought to the camps and in most cases, were also responsible for distributing them to the entire IDP population. The most frequently distributed resource was food, followed by medical supplies.

Food distributions in some camps were initially done centrally, mostly in the formal camps. This was accomplished by cooking the food at one source and portions allocated to individual IDPs. However, the approach was later changed and raw food portions were distributed to the IDPs instead. The CMs attributed this switch to the high cost of central cooking and were of the opinion it was unsustainable in long-term displacement. Identified methods and quantities used in raw food distribution varied widely.

> *…distribution is done monthly to tackle cost. Before we are doing central food distribution but now we have migrated to dry ration. We give them dry food, they cook by themselves… each person is to get 8.4kg. –* ***CM1***

Medical resources provided were handled slightly differently. The CMs stated medical supplies were deposited either at the closest healthcare facilities and dispensed by HSPs or offered directly to the IDPs and dispensed by the CMs. However, vaccination supplies were never handed over to the IDPs but were administered directly by the organisation providing it.

> *Sometimes they will send the drugs to the chairman. The chairman will now know how to distribute all the health things. –* ***CM2***

6.4.4 Theme 4 – CM communication strategies

This theme explores how the CMs interacted internally with the IDPs and externally with supporting organisations, groups or individuals. It illustrates how CMs bridged communication gaps between the two sides (IDPs and external bodies), and also provided further information related to how records were documented, shared and stored.

6.4.4.1 Modes of communication in camps

Communication channels for sharing information on meeting times, resource planning and giving updates on the conflict crisis were established in different ways. Internal communication within the camp included having a chain of command and designated spokespersons. As stated earlier, some camps divided themselves into groups and had specific representatives who acted as intermediaries between the group and the leadership committee; for example, LGA representatives and women leaders. For sensitive issues, such as health and financial challenges, some CMs communicated one-to-one with the specific IDP(s), if required.

> *…we divided ourselves into groups. So for each group, we have a leader. So if you have problem, maybe you will talk to your leader. So that he will come here… tell me "look at what is happening". If there is somehow that we can help... –* ***CM3***

External communications, such as those related to resource demand, between IDPs and supporting organisations or groups, were either the same or only slightly different from the internal communication process. In areas of differences, the CM and at least one committee member interacted with external organisations. Afterwards, they either briefed the full leadership team or shared the information directly with the general IDP resident population.

…we have ways of getting feedback based on the structures of the camp. I am the camp director, but we have a camp chairman. The camp chairman, camp liaison officers, camp secretary and camp assistant secretary who are all IDPs. Now whatever problems they have in camp, they let us know. Yes because they are living with them. – ***CM7***

6.4.4.2 CM camp monitoring protocol

Within most formal camps, internal monitoring processes were set up to monitor the local areas using a community-based security model. This approach involved IDPs and neighbouring non-IDP villagers acting as security personnel. These groups of people were required to be very vigilant, observant of activities in the area and were mandated to report suspicions of violence or unfamiliar activities. Furthermore, local non-IDP community members were sometimes invited to intercede in IDP disputes and conflict management; these typically included matters related to security.

… we have security, we have the villagers here. Whenever we have issues with the IDP, we bring them to come out to help us on the issue. – ***CM1***

In dispersed camps, most internal monitoring information was passed to CMs via phone calls from either IDP leaders or eyewitnesses. Some camps also tracked IDP movements and credibility of camp visitors by checking their legitimacy based on their answers to questions related to referees. For example, admission into some camps required the IDPs to have evidence of a referral from a local or religious leader.

But then, you can't just come into the camp without anyone who is a leader, either in your community or in your church, giving you a recommendation letter… or someone testifying about you. Now, if any of them is going out, they have to write where they're going too. And that is

*not because we control their movement, but because we want to know where they are at every point in time. – **CM7***

The CMs described the hierarchy for reporting different concerns in the camps, and stated it included the presentation of problems first to IDP representatives, next to the CMs, and then to either the supporting organisation or directly to the police for life-threatening concerns.

*If the IDPs have any problem, they as their camp leaders will refer the matter to the CMs. The CMs also refer to the situation to our office. Then when overall in our office, then they have to refer the matter to our headquarters… – **CM1***

Most CMs indicated NGOs monitored IDP activities and needs more than the government. CMs stated that on rare occasions, IDPs were sometimes involved in this monitoring process, for example, during needs assessment exercises. One CM was of the opinion that the presence of NGOs might have influenced the government's lack of involvement and therefore contributed to the observed indifference in taking on their responsibilities. Overall, the monitoring processes were unstructured and unreliable.

*… (government) may come to see the wellbeing of the people, giving them foodstuffs or assisting them with relief materials like malaria drugs, they are not doing it often like the NGOs are doing… They will just donate some little drugs and some other foodstuff. That's basically what they used to do, but they don't used to come often because of the NGO's support… but am not involved with some of the activities or discussion but when am involved it is maybe they just want to come and know what we are facing. – **CM2***

6.4.5 Theme 5 – CM perceptions of IDP healthcare

The CM healthcare theme presents their perceptions related to IDP health challenges and management processes. It describes their opinion about the

factors that influenced the health of IDPs and the associated health outcomes. The theme also outlined the roles played by supporting organisations that provided resources to the IDPs.

6.4.5.1 CM opinion of IDP health outcomes

The common diseases among the IDPs as reported by the CMs were similar to those mentioned in the FGDs. However, the CMs, added malaria itself had caused several deaths.

> *At any given time five people will be lying sick from malaria, people even die from malaria. As some people are getting better others are lying down, that's the normal life here. –* ***CM5***

Other health conditions reported by the CMs, but not highlighted in the FGDs, were chickenpox and measles. Mortality rates were however described as being very low, and in one camp (Stefanos), no deaths had been observed since the arrival of the IDPs to that location. Similar to the FGDs, both children and women were considered as most vulnerable, for reasons like being widowed, orphaned or lacking the capacity to obtain food. The CMs also emphasised children were most prone to contracting infectious diseases. However, all these factors were declared to influence the health and wellbeing of the entire camp population.

> *But the main sickness here is malaria, typhoid and… (also) chicken pox and measles. Because measles, they mostly believe it's the children that can get that kind of sickness –* ***CM1***

6.4.5.2 CM perception of healthcare service availability

Some CMs stated healthcare had never been provided to the IDPs at their current locations. However, this was more strongly emphasised by CMs in dispersed camps.

> *We do not have healthcare that are coming for our IDPs here. Even one single visiting health staff… (or) health service post – **CM4***

CMs stated the most accessible health facilities closest to the camps were not functional. One CM stated *"nobody wanted to stay there"* meaning no staff wanted to be posted or stationed in those facilities. This explained one reason for the shortage of healthcare staff. Furthermore, most CMs expressed the few HSPs available to IDPs lacked the skills required and most had not be been given recent medical training on IDP specific difficulties, instead they relied on previous basic healthcare experiences.

> *No (fixed health post). (Staff) actually come from the PHC….We have a community health worker who come here twice a week… some of them they come who are not trained, they are not professionals, but have experience, or have idea…. We have one (visiting health staff) for now, though sometimes the number dwindles… sometimes you see them coming, sometimes they stop. – **CM7***

Health services available were mainly offered by NGOs. Formal camps, especially government-run camps, had multiple collaborations between different NGOs and government agencies.

> *We have three clinics run by UNICEF in collaboration with the State and Local government healthcare…whenever there is a need, they have the liberty to access the clinic. – **CM1***

Since most IDPs sought healthcare services at neighbouring community facilities, which were usually far away, this caused an added burden on both IDPs and the local healthcare facilities. One CM shared that poor access to health services had resulted in the death of a pregnant woman who had developed complications but was unable to reach a health facility.

> *If you have your money you can go the healthcare… for our women to give birth is a problem for us…even last week we lost one of our women here… she wanted to give birth here, because there is nothing we can do… and if we don't have money we can't go to the hospital… because if you don't have money they will not take care of us. She died. –* ***CM3***

From the CMs' perspectives, costs influenced the type of health services available to the IDPs. Those in informal camps had to pay for any incurred health fees. IDPs living in formal camps had the advantage of having either the government or administrative NGO take care of their medical bills. However, IDPs in those formal camps were still limited by what the administrative organisations were willing or able to pay for.

> *(Mental health service) is capital intensive. We have done that but it's grossly inadequate. What I meant by that is this, we have over 4000 IDPs that we have registered and we believe that all of them are traumatized. But then we have done the psychosocial support to just a few out of that number. –* ***CM7***

Vaccination services were pointed out by the CMs as the most commonly provided health services at the camps, even in areas with no onsite healthcare centres. Vaccines were reported to be administered by PHC representatives who visited the camp, and these were mainly offered to children exclusively.

Children were immunised… they normally come to the camp to come and do vaccination from the PHC here, that's in conjunction with WHO (World health organisation) as well… they actually do it according to the ages of the children. – ***CM7***

6.4.5.3 CM description of disease outbreak management

Management techniques for disease outbreaks were vague in the majority of camps and ranged from having specific steps to having none at all. Most CMs mentioned no communicable disease management plan existed because no outbreak had ever occurred at the camp.

No, no. Because such has not happened so… there is no any (health or outbreak) protocol. – ***CM 9***

The CMs mentioned that international organisations were meant to be responsible for issues related to active case finding, case management or outbreak management. Feedback implied no proactive management technique was in place for handling communicable diseases, and this supported the finding of reactive management decision-making approaches.

No (outbreak) plan. All this is supposed to be done by World Health Organisation, who are not coming here… they are responsible for this. – ***CM9***

On the other hand, some CMs assumed "disease outbreak management" to mean health education. In such cases, IDPs were gathered and enlightened on some diseases, or HSPs discussed symptoms related to existing health conditions with individual IDPs. This approach had been used during the Lassa fever outbreaks in the region.

…if there is an outbreak of cholera, we have report stations which normally manage this kind of diseases. Then we have a space ground,

*you know we need to quarantine them. So, yes we have special healthcare for them… When there is outbreak, you know, I think summon for emergency meeting. Then when it overwhelms the state, then the national government now will come in. – **CM1***

In informal camps where outbreaks had occurred, CMs stated that despite the reports that had been made, no external support had been provided to manage this.

*(Had outbreak of) Typhoid and malaria around September we were calling for emergency help, no response. – **CM4***

6.4.5.4 CM insight into IDP healthcare management partnerships

Health services were provided by various groups, which included individuals and organisations. The CMs stated different levels of partnerships had been formed between these organisations and at different levels (national, zonal, state and local government levels). These partners included government institutions, international organisations, faith-based organisations, and private individuals. However, minimal support had been received directly from the government. Partnership structures and responsibilities were not always clear to the CMs, and most CMs were unable to personally manage healthcare collaborative actions, especially in informal camps. For instance, in the FCT, some government agencies visited to provide healthcare on rare occasions.

*…the Nigerian Air Force and Nigerian Navy come here sometimes with their medical team to treat our people…we beg government that "let him help us to attach us with one government hospital so that if we have a patient we will take it to there". But they didn't agree…. – **CM3***

6.5 HSP Interview results

Interviews with the HSPs explored the role of health workers in the camps, activities they performed and their personal perceptions of IDP health management. Only six camps had HSP representations, and the three camps with no HSPs were dispersed-informal campsites. A total of seven HSPs participated, and gender split was fairly even; four females and three males. Most were either VHWs or CHWs, and the VHWs were also called TBAs. One nurse was identified in Borno state and was included in the study in addition to the VHW at the same camp **(Table 6.6)**.

Table 6.6 – Overview of HSP participants

HSPs	State	Camp	Camp Type	Participant	Gender
HSP1	Borno	Bakassi	Planned, Government	VHW	Male
HSP2	Borno	Bakassi	Planned, Government	Clinical Nurse	Male
HSP3	FCT	Durumi Camp	Self-settled, Informal	VHW	Female
HSP4	FCT	Kuchingoro	Self-settled, Informal	VHW	Female
HSP5	Nasarawa	Gurku	Planned, NGO	CHW	Female
HSP6	Plateau	Stefanos	Transit, NGO	CHW	Male
HSP7	Taraba	Gulum	Transit, Informal	CHW	Female
NA	Kano	Gaida	Dispersed, Informal	No HSP	NA
NA	Kaduna	Kyauta	Dispersed, Informal	No HSP	NA
NA	Taraba	Mullum	Dispersed, Informal	No HSP	NA

After data analysis, four themes emerged from the HSP interviews **(Table 6.7).** The themes were all related to IDP health and reflected the HSPs' perceptions about the disease prevalence among IDPs, healthcare resource availability, monitoring, and partnerships. The partnership theme also included details on IDP involvement in camp healthcare management.

Table 6.7 – Summary of HSP themes and subthemes

Theme	Subthemes
HSP accounts of IDP health outcomes	Disease prevalence among IDPs Identified IDP mortality
HSP description of IDP healthcare facilities and services	Accessibility of healthcare facilities Healthcare staff availability Health service provision and administration Healthcare referral services
HSP IDP health monitoring	Camp disease surveillance system Medical records and report documentation
HSP perspective on healthcare partnership and IDP involvement	

6.5.1 Theme 1 – HSP accounts of IDP health outcomes

This theme explores the HSPs' observations of the general health challenges, current disease incidence, and observed mortalities since the arrival of IDPs to the camps.

6.5.1.1 Disease prevalence among IDPs

HSPs gave a comprehensive list of diseases experienced in the camps. These included malaria, diarrhoea, cough, tuberculosis, pneumonia, skin problems, rashes, fever, and typhoid. Cases of measles**,** meningitis, and cholera were specified to be rare.

The HSPs attributed health outcomes to changes in the IDPs' environment. They implied that relocations from their homes might have made IDPs more susceptible to certain diseases, especially malaria. In addition, other factors presumed by the HSP to cause these diseases included poor hygiene practices, nutrition, and environmental sanitation, as well as the lack of required resources needed to manage the health outcomes.

…There is malaria everywhere, also pneumonia. Cold enter children body a lot. Now cough everywhere because of dust…purging (diarrhoea) is common because they don't have 'better water' or 'better food' and children come plenty (for diarrhoea). – ***HSP3***

All the HSPs stated that children were the most affected groups, for reasons, which included their tendency to interact with more people and their inability to monitor their own health and environment. For instance, in Bakassi camp, IDP children contracted measles infection from other children within a nomadic tribe, and this led to an outbreak in the camp, which affected hundreds of IDPs in two months.

The last two months, we had outbreak of measles… Because the Marte people (normadic group) almost all of their children had measles and they even passed it to Gwoza people (IDPs), because they used to go and fetch water from that place. They even go to toilet there… so had about 400 cases of measles and most of them are under 5. – ***HSP2***

6.5.1.2 Identified IDP mortality

Only one HSP stated not knowing if any deaths had occurred in the camp, while others indicated deaths had been observed but they had no knowledge of the exact numbers. The majority of HSPs kept no records of observed deaths (mortality records) since the IDPs moved into the camps. Formal camp HSPs were able to present estimates in reference to specific periods when records were last documented, but informal camps had no reference points. Mortality estimates since arrival in the camps were presumed to range from 2 to 20 deaths. Most were among children and the elderly; and the primary causal factor was malaria, while a few deaths were from old age and chronic diseases such as AIDS.

> *Yes, we have, in all we had about 20 (deaths), we are up to a year here… We only have one record of AIDS that killed one person the rest are just normal sickness like malaria. Children are approximately 10, and adults are few. –* ***HSP1***

Some HSPs stated other factors that contributed to high mortality were poor early identification of critical diseases, for example, meningitis; late presentation of cases to health personnel/clinics; lack of medication and health commodities at the health centres; and having no personal caregiver, especially among the elderly. In addition, most HSPs lacked experience with certain diseases; therefore, causes of some deaths were not verified.

> *People die because no one to take care of them very well, and we tried our best and it's not working and those people die… sometimes they don't bring (the cases) on time… mostly children… when it gets too much they bring them and then they cannot make it. –* ***HSP4***

A few cases were also attributed to pre-existing health conditions, that is illnesses existing before displacement or acquired during the migration period. An example was the HIV patient who died in Bakassi camp. The HSPs stated the case had been presented to them at a very late stage when it could not be managed or treated at the primary care level.

A controversial view regarding mortality data emerged when an HSP implied death statistics were "*not something people count*" since there was really nothing that can be done due to lack of resources.

> *Ah! No, death is not something people count. Isn't it when you have medicine you can give the person who is sick? Some of them when they are brought, we cannot treat them, so they die. –* ***HSP3***

6.5.2 Theme 2 – HSP description of IDP healthcare facilities and services

This theme discusses in detail the health services and resources provided to IDPs, from the HSPs perspective. It includes extensive information on health staff, facilities, referrals, healthcare cost, and management processes.

6.5.2.1 Accessibility of healthcare facilities

Healthcare facilities commonly accessible to IDPs were those at the primary care level, which included health posts and PHC centres. Generally, PHC facilities in the country were managed by the LGAs, with support from their respective state ministries of health. PHC services offered at sub-LGA levels, in districts and villages, were done at health posts. The type of facility available to the IDPs depended on the camp's location, but rural camps were usually closer to health posts than PHCs. Nevertheless, medical commodities in both types of facilities were very limited, especially at the health posts. This scarcity affected both IDPs and non-IDPs since the facilities used in most camps served neighbouring local residents as well.

> *They bring people that have malaria… you give them medicine that we have. They bring people that have fever, you know it is IDP so every now and then somebody will bring somebody that have sickness… –* ***HSP5***

Most essential requirements, including basic drugs, were unavailable in all the camps. The few commodities reported to be present were dressing scissors, stethoscope, steriliser, syringe tray, stethoscope, blood pressure apparatus, and thermometers.

We don't have even gloves… and you know we deal with blood when we touch woman giving birth… there is nothing really here, just the empty containers everywhere. – ***HSP3***

Besides the government-run camp, other health facilities had no specific medical supplier. Medical resources such as antibiotics and pain killers were usually provided by different groups or individuals through donations to the camps. However, these were often one-off and had no set schedule or process. Consequently, there was no procedure for tracking medical resource shortages or replenishing stocks when required. Some HSPs stated these limitations resulted in being unable to treat IDPs who visited the facilities; hence they could only help the patients manage their conditions or referred them to hospitals (secondary care).

Sometimes some people they will come and they will bring (health commodities). Sometimes government people once in a while they will bring. But it's been a while since somebody brought anything there. – ***HSP5***

6.5.2.2 Healthcare staff availability

Government-run camps had more HSPs available either at the health facilities or through frequent visits to the camps. In other locations, some days, there were no HSPs at the health centres, and none visited the camps. On average, most facilities had staff present only 1 to 3 times a week, and the reported poor availability was influenced by a lack of financial support.

Sometimes we come three times in a week, sometimes once in a week. You know that government they are not bringing money. So I have to try and come sometimes once, sometimes 3 times, sometimes 2 times. But if they have emergency, sometimes they will call, I will come. And when we finish I will go back. – ***HSP5***

The majority of staff were unskilled or CHWs who were local community members trained for about two years to provide basic healthcare such as first aid, immunisation, how to conduct active case finding and health referrals. These CHWs were commonly used in the country, to bridge human resource for health gaps, especially in rural areas. However, their limited training and skills meant they could not be considered as highly skilled health workers like nurses, midwives and doctors. Of these skilled groups, only one was identified among the camps visited at the PHC in Bakassi camp. Hence, for serious cases, most facilities relied on visiting health practitioners to function, especially staff from non-governmental institutions such as UNICEF. The HSPs in informal camps stated no national-level health staff had ever visited.

In some camps, IDPs previously exposed to healthcare settings acted as the IDP healthcare contact person before they were referred to PHCs, this also included TBAs. Often, these individuals were the only persons consulted for health advice.

> *…he's a retired staff with the General Hospital in their own local government there in Gwoza. So, he was an attendant, a ward attendant. So he has little experience of giving them first aid. So in case, he has difficulties he calls me, even if it's not the days I come here, because I come Tuesdays and Thursdays. –* ***HSP6***

6.5.2.3 Health service provision and administration

The HSPs revealed services offered at health facilities accessible to IDPs were mostly basic and included first aid, oral rehydration therapy, dressing of wounds and drug prescriptions. Sometimes, administration of health services was influenced by age, gender, type of illness, and how urgent the cases were. Most facilities offered treatment for malaria; however, the management

of this was questionable since there were no laboratory services, and appropriate diagnostics tests were not usually conducted before treatments. Other chronic and long-term illnesses, such as high blood pressure, were referred and handled at the secondary care level (hospitals).

Health promotion and education were offered at most of the health facilities and were often conducted directly in the camps. Health topics covered included raising awareness and management of diarrhoea, malaria, HIV, immunisation, hygiene, reproductive health, and breastfeeding. However, this was not offered at all camps, and in areas where they had been available, HSPs occasionally experienced challenges in persuading IDPs to accept the interventions. An example shared by one HSP was difficulty in getting the IDPs to accept condoms during a reproductive health promotion session. The refusal was attributed to the IDPs' cultural values, which did not actively encourage birth control.

> *They are rural people. We have condoms here, but they are not interested. So we issue it to people that need them outside IDP camps. So they get women pregnant and give birth without problem. We have some women with ten, eleven children…Their mindset right from home is the problem. –* ***HSP6***

Generally, vaccinations were administered to only pregnant women and children at the health facilities. No HSP mentioned vaccines offered to other adults, especially adult males. As a result, the HSPs highlighted that, when vaccination teams went to the camps, the common practice amongst IDPs was to present only children for vaccination.

> *We consider the ages and gender. From when they give birth to the child, in the hospital, then we know when to administer hepatitis. And*

> *also consider, age, gender, before administering it. We will also mobilize women, and we administer Hepatitis, BCG then after one month we give Penta 1, then after a month Penta 2, Penta 3 6 to 17 weeks, after nine months measles, yellow fever. Six months down we do IPD, OPV below six months. We administer vaccines based on their age. –* ***HSP1***

Very few HSPs knew the main types of vaccines required, including the national EPI list, or what had previously been administered in the camps. This was more obvious among facilities not offering vaccinations and lower cadre HSPs. Untrained IDP HSPs (VHWs/TBAs), did not directly administer vaccines but only provided support to visiting vaccination teams. Inconsistency in vaccination administration timelines was observed across all camps. The HSPs were of the opinion that since vaccine protection lasted for long periods, vaccination emphasis was not crucial. Hence, focus on vaccine administration for IDPs reduced as IDP influx into camps reduced.

> *Yes, we conducted the test last year and gave those that are free from it the vaccines. But this year, we did not do it. We are yet to do it. Anyway, since we don't have new comers coming in, because the vaccine lasts for about ten years, there may not be need for that. –* ***HSP6***

Health services at the primary care level in the country are required to be offered free of charge, but some facilities demanded financial commitments. The payment depended on whether the commodities had been donated to the facility or not. Where the resources were donated, services were mostly provided for free. However, in the formal camps, all health service costs were handled by the leading organisations.

> *Free, we don't charge… people, spiritual individuals and organisations are the ones supplying the drugs. We were supplied some drugs and most of the drugs were injectable. Since we don't need them here… we*

asked for them to value into money and then give us drugs instead. So we don't treat them with some drugs… Referral services… they do pay, except if it is case like TB and leprosy, these treatments are done free everywhere. These are the cases, but any other case we pay. Stefanos Foundations are the ones paying. – ***HSP6***

6.5.2.4 Healthcare referral services

Conditions referred to secondary level healthcare (hospital) were considered to be more serious diseases or cases requiring special attention beyond the capacity of the primary care staff. Conditions typically referred included cases requiring a blood transfusion, surgery, mental health problems, complicated pregnancies and recurring illnesses that could not be tested at the primary care level such as diabetes.

Cases that we are unable to treat here will be referred to these hospitals like admission case, surgery, severe diabetes, some delivery, accidental cases and mental problems. – ***HSP1***

In some locations, health posts referred patients to the PHCs who may then forward those they were unable to manage to the hospitals. However, although most childbirths were stated to be handled at the PHC, TBAs were often the first to be called when women were in labour. Consequently, deliveries at PHCs were often complications TBAs were unable to manage. Some IDPs, however, boycotted primary care entirely and went directly to secondary care locations, especially when the PHCs lacked equipment or staff.

Those sickness… but we don't have medicine…we don't even have things to help them. Like when some pregnant women come to give birth, we tell them to go to the hospital, like all those children getting too sick, nothing to test them…we tell them to take them to the hospital, if

*you cannot do anything. If it is not like common fever, we tell them to take them to the hospital. – **HSP4***

The HSPs pointed out that referral service uptake among IDPs was influenced by cost and distance from the camps. Most referral locations were far from the camps and transportation options sometimes depended on the referral purpose and the patient referred. Children were often carried on the back of an adult who then walked to the hospitals, while adults could use hired motorcycle riders. Services at the hospitals usually required payments, for example, laboratory tests. This financial burden had significant implications on informal camp IDPs who lacked both financial resources and organisational support. Consequently, the majority delayed presenting their cases to health staff to avoid incurring expenses. This delay made their conditions worse and sometimes led to death.

*(Transportation) depends. If it is a small child, it is on the back we carry it. If it is an adult, we find okada ("means motorcycle") that will go, we go find all these okada people…we put the person for okada, sit down with them and carry them to the PHC… if the PHC is not too far. – **HSP5***

Referral services in the formal camps had better management standards since there were established partnerships between primary and referral (secondary) facilities. These areas offered more services and adequate transportation options like ambulances or cars. In addition, each facility had a clear outline of the specific cases they managed. Unfortunately, informal camps did not have these benefits.

*We will call the ambulance so that it will carry them to that Bakassi A, team A. The referral centre provides everything…because it's a general hospital, state specialist hospital, so they do everything there. – **HSP2***

6.5.3 Theme 3 – HSP IDP health monitoring

This theme captures the HSPs' perceptions of health monitoring and documentation processes for IDP health records. This also included their opinions related to disease surveillance, outbreak management and staff capacity building.

6.5.3.1 Camp disease surveillance system

Most camps had no disease surveillance plan or method of tracking outbreaks. In camps with no on-site health services, the HSPs stated some IDP chairmen were proactive in reporting suspected cases to the nearest health facility or HSP.

> *Last year, the Chairman of the Camp is very cautious and very vigilant. So, he called me on suspicion of measles so, when I came, I saw him, I saw the child, I said no it's not measles. But we have a surveillance officer that does come from the local government. –* ***HSP3***

HSPs in the formal camps stated daily counting of cases, for instance, diarrhoea, were used to determine the likelihood of an outbreak. While HSPs in the government-run camp stated infographics were used during physical observations and bodily samples collected from suspected cases were sent to laboratories for confirmation.

> *We have pamphlets that we carry around. And in cases like skin disease like chicken pox we bring them immediately and take sample to lab and then find a way to prevent it; and also we look at hepatitis cases where people eyes will be yellow we go immediately to isolate the person to the hospital. Signs like change of face colour to red. –* ***HSP1***

Outbreak management was not optimal in all the camps. One HSP stated that although an observed food-poisoning outbreak was contained and treated, the

primary source of the infection was never confirmed. Although, surveillance officers from the LGAs sometimes visited the camps for monitoring, especially when suspected cases had been discovered. On such occasions, if the cases were confirmed positive, this triggered mass vaccination campaigns to be conducted in the camps. In locations where external supporting organisations including WHO and UNICEF were present, these organisations were also notified immediately.

> *We do… We call the surveillance officer from the local government. Most especially, if it is the killer diseases like measles, meningitis, we do call. So even when they call me on this suspected child, I call the surveillance officer from the south local government. I called him, he came. We saw the child together but it was not measles. So for that reason, most of the children were vaccinated. –* ***HSP6***

6.5.3.2 Medical records and report documentation

Most HSPs did not keep daily records of attendance, services rendered or health outcomes, as shown earlier with the lack of mortality records. The main reason given for poor record-keeping was “not having time” to document the information since HSPs were more focused on administering treatments. In some facilities, records were previously documented, but this ceased due to the stress of juggling between the high influx of patients and record-keeping. Despite the reported high volume of IDP patients in all the camps, some HSPs stated there were also days when no patients showed up at the facilities.

> *Ah, yes. We had them before. These are the exercise books. But along the line, we stopped using the exercise books because if they come many, for you to check for the name and do the treatment is very hectic. So we just neglected them, but we have some of them there. –* ***HSP6***

Case reports of disease outbreaks were not kept by the HSPs but by local surveillance; authorities contacted directly in writing or by telephone. Associated information, including vaccination records, were taken directly by whichever organisation or group had administered the vaccine. Also, referral records were not kept at the primary level facilities except in the formal camps which had referral log files at the PHCs. HSPs sometimes accompanied the IDPs to the hospitals and proper documentation of referral cases were often prepared there.

> *Referral record…. We don't have….Usually, if we have any case, we do take them by ourselves there without any referral letter, except if they go out to outside Clinics, that's when they get referral letters. But if it is here, I will take them myself to the hospital. –* ***HSP6***

Capacities of HSPs contributed to poor record-keeping and monitoring. Gaps in knowledge were attributed to lack of training on how to manage humanitarian emergencies or possible outbreaks. An example is shown through some HSP opinions of record-keeping, which they pointed out to be unnecessary since no one monitored facility activities.

> *Mortality records? No! We don't have. How can we write that one now? Unless we can begin to do that but now, we don't … We do not keep consumption records… Why do we want to keep referral information? We do not need to keep those things nobody asks us so we don't have to keep it. –* ***HSP5***

6.5.4 Theme 4 – HSP perspective on healthcare partnership and IDP involvement

This theme describes the HSPs' opinions related to organisations and groups supporting and providing healthcare services to the IDPs. It also elaborates on the involvement of IDPs in health management decision-making.

A vast majority of health resources for IDPs were provided by organisations and groups not affiliated with the government. These supplies included drugs, tetanus injections, and condoms, as well as visiting health staff.

> *…let's say about 200 are having acute diarrhoea, may be because of the food that they shared for them… they have acute diarrhoea. But thank God for UNICEF, we have ORS (oral rehydration salts) and zinc tablets. – **HSP2***

In areas where the IDPs used the same facilities as non-IDPs, their involvement in community-level healthcare decision-making was limited. In the formal camps, however, IDP committee leaders were sometimes invited to participate in health intervention planning.

> *They are involved, because now if we want to do something, we will call the community leaders, the chairmen of various local governments. They come here, then we will discuss about decision making, they will go and tell it to the people. – **HSP2***

Gender-focused consultations were also carried out in some camps, allowing gender-sensitive issues to be addressed. HSPs also highlighted that IDP involvements ensured health interventions were culturally relevant, and this improved uptake, mainly when they acted as advocates and encouraged other IDPs to participate in camp health-related activities, for instance, vaccination.

> *Most health-related decisions do not involve the general IDP population. Majority are taken by the leadership… Yes men and women are consulted separately if there is a medical problem… they don't participate in anything for the community. – **HSP6***

6.6 APM Interview results

APM participants considered were staff from relevant departments actively engaged in IDP management within NEMA. The two core departments identified were the Department of Relief and Rehabilitation (DRR) and the Planning, Research and Forecasting (PRF). The DRR's general responsibility was focused on vulnerable groups, which included IDPs. While the PRF was responsible for monitoring and evaluation, as well as policy, programs, and implementations. Both departments worked closely to manage matters related to IDPs. At the state level, various organisational streams were also engaged in IDP management. APM participants were therefore considered from these relevant departments, and all participants identified for the study were males **(Table 6.8).**

Table 6.8 – Overview of APM participants

Participant	State	Management Affiliation	IDP Management Organisation	Participant Role
APM1	Borno	Government	SEMA	State Camp Coordinator
APM2	FCT	Government	NEMA	State Disaster Coordinator
APM3	Kaduna	Government	NEMA	Zonal Coordinator, NEMA
APM4	Kaduna	Government	SEMA	State Principal Relief and Rehabilitation Officer
APM5	Kano	Non-government (Religious institution)	Hisbah Board	Head of Welfare and Repatriation Unit
APM6	Nasarawa	Government	SEMA	State Emergency Response Officer
APM7	Plateau	Government	NEMA	Zonal Coordinator
APM8	Taraba	Government	SEMA	State Focal Person and Agency Secretary

Four major themes emerged from the APM data analysis **(Table 6.9).** These themes provided in-depth organisational information; and the perceptions of APMs on issues related to IDP management, healthcare services and interaction with humanitarian aid providers. Identified domains described the

factors considered by national authorities around different aspects of IDP management. Each theme and its related sub-themes are described in detail with supporting text extracts.

Table 6.9 – Summary of APM interview themes and subthemes

Theme	Subthemes
National authority organisational information	National organisational responsibilities National organisational strategy
National approach to IDP management	Nationa IDP organisational process Nationa IDPadministration management staff Government approach to camp management APM impressions about IDP management involvement
APM perceptions of IDP healthcare management	APM description of IDP health management Health intervention planning and implementation
External healthcare partnerships	

6.6.1 Theme 1 – National authority organisational information

This theme provides details about the national government organisation responsible for IDP management. It highlights the organisation's background, focus and operational strategies for IDPs.

6.6.1.1 National organisational responsibilities

The APMs pointed out the primary role of NEMA was disaster management and this included managing hostile activities, natural disasters and human displacements. IDP management was a component under disaster management and was stated to have only received more attention in recent years, due to the ongoing Boko Haram crisis and amplified insecurity in the country.

> *Our mandate because of the crisis now, we are focused more on internally displaced persons. Our mandate also include floods, building collapse, any disaster, we are involved in virtually any disaster. But for now, because of the security situation, we are more into taking care of internally displaced persons and floods.* ***– APM4***

NEMA, as a federal government organisation, sat at the national level and ran most of its activities through the state subsidiary, SEMA. The management structure was different in the country capital (FCT), which was not an official state and had no SEMA. Therefore, NEMA was directly responsible for FCT issues. Whenever a disaster occurred, in every state besides the FCT, SEMA was the first point of call. Establishment of SEMA was said to be a recent development of less than ten years at the time of data collection in 2016. In situations where the challenges exceeded the capacity of the state to handle on its own, NEMA was then contacted to intervene. Most APMs were of the opinion that one core responsibility of NEMA/SEMA was to solicit for relief materials.

> *We report cases of disaster that overwhelm the state, so if it is within the capacity of the state, then we can manage it. And also to solicit for support of relief material for people that are in distress situation. –* ***APM8***

One APM stated IDP management was "*the responsibility of the government of the day*". Despite that, acceptance of this responsibility varied across the states. For example, SEMA in Kano state did not assume IDP management responsibility, and this contributed to the informal camp settings.

> *We handle everything concerning IDP management here because when they came here nobody accepted them they were just 23 only Hisbah that accepted them to take care of them… No other agency in the state is responsible for IDPs except NEMA, which is their main responsibility but they don't do it, they don't do anything –* ***APM5***

6.6.1.2 National organisational strategy

Most APMs were quick to emphasise NEMA/SEMA was "*not a response agency*" but instead a "*coordination organisation*". They stated that during an emergency, their key role was to mobilise stakeholders and other organisations that could and would initiate rescue activities aimed at helping the affected people. These activities included the supply of food and non-food items, medical facilities, water, and security. Agencies working with NEMA/SEMA were grouped under different sectors depending on their areas of speciality and according to the humanitarian cluster coordination guide. In respect to IDP issues, this included working with more international humanitarian organisations, and each speciality group had a sector lead.

> *We are not a response agency, but we trigger response agencies like the fire service, the road safety, the civil defence, the federal ministry of health in the event of any epidemic outbreak. And as a federal agency under the office of the presidency, we coordinate cooperate and collaborate with all these response agencies during disaster outbreak, so that we can have a collective operational activity to tackle the problem. So overall, we are a coordinating agency. –* ***APM7***

Implementation of rescue activities and organisational involvement varied by zone and state. The APMs pointed out that this was influenced by the number of displaced people, within or who had migrated into the state. Locations with fewer IDPs generally did not have well-developed or active IDP management strategies, for instance, Kano state. Although in every state with IDPs, inventories were reportedly taken immediately after their arrival and in some locations, medical check-ups were also conducted.

> *Automatically, when IDPs gather in a particular place it is our duty to make sure that they are properly taken care of by responsible agencies whose mandate, primary assignment, you know relates to their wellbeing there in terms of provision of medical facilities for them, in terms of security, shelter, environmental cleanliness and other things like food items. –* ***APM7***

As a general rule, when IDPs arrived at a particular location, relevant sectors were notified, but the speed at which this occurred was influenced by how active SEMA was in the state. Hence, the overall follow-up of IDP migration and settlement by the authorities ranged from non-existent in states with few IDPs to very active in locations with more IDPs. Additionally, this factor, in turn determined how action plans were implemented. For instance, compared to informal camps which had no administrative support, formal camps had standard procedures for managing suspected cases which included guidance on alerting the international organisations.

Action plans and strategic initiatives, which included the provision of shelter, security, food, and non-food items for IDPs, were more available in the north-east zone, which had the highest disaster ranking priority as well as the highest number of affected people. One APM stated strategic implementation of action plans was not possible considering the unpredictable nature of disasters and displacement. Hence, most actions taken were usually "automatic" responses to immediate challenges.

> *There is an action plan. But it's more in north-east, we have few within our region here, so those that are in our own region which is the north-west are not in formal camps you see this ones are staying with host community most of them are doing one thing or the other, so for them we only intervene and provide them with food and non-food items. Most of them are into one job or the other now. –* ***APM4***

6.6.2 Theme 2 – National approach to IDP management

This theme investigates the APMs' personal interpretation of the processes and procedures used to plan camps and coordinate stakeholder involvement in IDP management. It also explores how the authorities engaged IDPs in camp management activities.

6.6.2.1 National IDP organisational process

Most national IDP management team members were from partnering organisations, generally other government agencies. Different committees existed to tackle specific sector needs such as shelter, health, and WASH; and administration of these committees was executed through the humanitarian coordination forum. The forum had been set up for the conflict crisis and served as a platform where all partners involved in IDP management assembled to hold discussions, plan and present feedback on their engagements. Disaggregation of core sector responsibilities to different committees, which consisted of organisations specialised in that field such as health and WASH, made the overall IDP management task less difficult for NEMA.

> *..we also have protection sector working group in the state. Which is being cheered by SEMA and co-chaired by United Nations High Commissioner for Refugees (UNHCR). And….. We have humanitarian coordination forum also in the state. –* ***APM8***

A central committee led by NEMA guided the general humanitarian coordination and oversight of each sector. Hence, all organisations offering IDP support had to pass through NEMA/SEMA, who in were in turn required to ensure fair distributions were made, for example, shelters. This approach

presented evidence of established management hierarchy and reporting chain, except in states where SEMA was inactive.

> *There are committees that run that. A central committee that gets to know about the activities of the sub-committees, which is headed by NEMA. Members of the subcommittees report to the main committee that these are the issues that are in the execution of that committee's job, about their challenges their risks and they report back to the main committee head outlining that these are the issues for the attention of the NEMA. –* ***APM3***

APMs revealed major strategic planning was done at the national level before being implemented by the states, especially those related to the north-west and north-central regions. For example, procurement for IDP related resources was often carried out centrally by NEMA. Whenever states needed relief items, for instance, shelters, such requests were forwarded to the national office.

> *We don't have any ongoing project in the zone here. Except in other zones… A lot of our things are centralised in the head office. As field officers, we are only concerned with immediate action when disasters occur. So when we need support, we just inform the head office. If it's what we can handle at our level here, we just handle it. –* ***APM7***

Most APMs stated all IDP settlements in their states had been assessed and, in some cases, the assessments involved different partners. An example of a collaborative evaluation was a vulnerability screening carried out by Human Right Monitor in collaboration with UNHCR under the protection sector, and this was chaired by SEMA and UNHCR. However, such structured collaboration was lacking for informal camps.

Most assessments did not follow a scheduled timeline but were often performed "*sporadically*" whenever APM staff happened to be within IDP settlement locations, especially for informal camps. These types of assessments were mostly situation assessments, which are rapid inspections of current conditions, and did not capture the comprehensive needs of the IDPs. The main factor affecting the execution of proper assessments was the lack of adequate logistical support, which included both workforce and finance.

> *…anytime that we find to be in one place, we try to visit to… it is done sporadically, wherever we go we do it. Because of the issue of logistics is a problem. That is why some of the places we can't visit there. When we have logistics we go, when we don't have it, it is a problem – **APM8***

6.6.2.2 National IDP management administration staff

Some APMs were unsure if all staff working with IDPs were adequately informed of their primary job responsibilities before being assigned to the role. They did, however, indicate that the capacities of the DRR staff were assessed and annual training was conducted to update their knowledge on IDP management procedures and recent global statistics. Such training was also extended to junior staff and mobile transportation drivers involved in field operations. Some APMs indicated that the current IDP crisis had overstretched NEMA/SEMA's capacity, workforce and resources; therefore, most staff had dual roles, which had not been the norm.

> *…capacity is not enough… continue to train and retrain… Some people don't have knowledge of some things, even if it's their line… but when they work together, they get experience there… So practical it is very important for staff to involve themselves so that they will learn more. On the job training. – **APM6***

Recruitment was handled at the national level, and although more staff were required, that could not be obtained due to lack of finances. IDP management specific staff, mostly from other government agencies, were trained by international partner organisations. However, training attendance was still also influenced by logistics. For example, APMs sometimes travelled out of state for this training; therefore, not all staff were able to participate in all training opportunities.

> *We've been trained on so many things, but not specifically alone to IDPs… training includes camp management… need assessment… risk identification management, monitoring assessment. First Aid, Psychological First Aid. We've been trained on a lot on that. –* ***APM4***

To ensure staff safety, the APMs revealed NEMA involved local community leaders and security agencies. As such, local communities had been assigned designated responsibilities so were more willing to be vigilant and make reports. Also, government security personnel such as the police and military, in the formal camps extended protection services to non-IDPs. However, insurance coverage was not available, so field staff performed their tasks at personal risks. This may have deterred most staff from participating in field projects, especially in active conflict locations in the north-east, and consequently contributed to staff shortage.

> *Ideally, the staff are supposed to be insured… But we don't have it. There is no insurance cover. When anything befalls you, you are on your own. We don't have that security... –* ***APM8***

6.6.2.3 Government approach to camp management

The APMs did not outline any specific procedures for establishing a camp but indicated priority was given to IDPs in locations acknowledged by the national

authorities. As shown in **Table 6.4** and **Table 6.5** camp establishment and management organisations were not often the same, for instance, Gurku camp was set-up by Mission 21 NGO but managed by the IDPs. Factors that influenced camp set up included finance, government opinion and the anticipated duration of camp stay. Camp set-up was generally not encouraged by the government, especially for long-term use, and was usually avoided. As a result, when camps were absolutely necessary, a few unconventional tactics were adopted to ensure it was not set up for long periods.

> *Federal government does not give money to IDPs because once you start it, you may not be able to sustain it. We give only the basic necessities…we don't encourage long term camp existence. Because the moment you do that, some IDPs will capitalise …and not want to leave the camp…Being in the IDP camps for long is very expensive to manage. So in most cases, even at the national level; we don't allow camp management to exceed three weeks. Where it does, it doesn't exceed four so that they will be up and doing. …. –* ***APM7***

In some cases, NEMA relied on other organisations to help set up or manage already existing groups of IDPs. For example, in Plateau state the transit camp originally planned to be a temporary settlement was being managed by an NGO, “The Stefanos Foundation”. Camps with NGO supported management were usually considered as formal camps.

> *The issue of IDPs is part of the responsibility of NEMA to coordinate all the support and all the up keep of IDPs in any camp. Particularly those in a formal camp. The few camps we have, I don’t even want to call them camps… But still NEMA has some responsibilities to take an inventory of them as they arrive… there are camps but there is not budget to run those camps. –* ***APM3***

Similar to the organisational procedures, the administration and management of government-run camps were handled by specialised sector committees. Specific roles were assigned to each organisation and all field information including implementation, experiences and challenges were reported to the central committee headed by NEMA.

> *When a camp is established, the first meeting you are going to have is to distribute roles to every one of them, and as you distribute roles and responsibilities, you follow up. That is the role of the camp manager –* ***APM7***

The purpose of general IDP monitoring was identified as a means to assess whether the IDP populations were increasing or decreasing and sometimes to check their health status. However, the APMs did not clearly state what aspects of health were monitored or how this was done, although more emphasis was placed on the basic needs of the IDPs, which mostly included food.

> *…if we have IDP's coming we take an inventory to see what their basic needs are at that initial stage, then we do a recommendation to the head office of the state that we have this number of IDPs by categorizations: male, females, physically challenged those with health issues. –* ***APM3***

Unlike the CMs, APMs visited the camps less frequently with no defined time schedule. But similar to formal camp CMs, visits occurred more often; while in informal camps, site visits were based more on the "*feelings of not having heard from the IDPs in a while*". Such visits were often used as opportunities to carry out quick observations (considered as assessments) and also a time to address problems requiring immediate attention, if possible.

Well if it is a designated camp, we have to be there… throughout 24 hours… But since this one, the IDP are integrated into host communities, we will visit them twice or three times a week… to see their situation… if there is any issue… which warrant us to report to government, we will. – ***APM8***

6.6.2.4 APM impressions about IDP management involvement

All APMs agreed IDP participation was crucial and needed to be considered at every stage of management. They emphasized that not doing so would result in the failure of any intervention. In addition, they stated such involvements further benefited the IDPs because it gave them a sense of ownership, helped them forget their worries, encouraged more engagement and presented opportunities for feedback on the interventions offered. The APMs added that the rights and opinions of IDPs needed to be understood and protected; and this was achieved by involving them in the planning and execution of activities, as well as through partnerships between officials and IDPs.

… IDP taking ownership of that program is a sure way of succeeding… they should play the role at all stages of the program… the conception, program delivery, final monitoring and final analysis of the success or otherwise of it – ***APM3***

The government-run camp had an integrated management structure, which included all key stakeholder groups and IDPs. Here, IDPs were included within different planning committees were they helped identify gaps and also acted as communication channels between the committees and all IDP camp residents. This process displayed good level of IDP involvement in intervention planning and delivery.

…they are involved, it is easier when you carry them along… They know the terrain, it is their people and most times when they are involved it is

> *advantageous to engage them and it reduce duplication… Normally vaccines are given with incentives to it… some IDPs want to collect much more… having IDPs involved, they know who and who have collected … We can't do everything down to the grassroots all 100%… they make identification a lot easier – **APM1***

Most APMs stated training offered to the IDPs was not from NEMA but NGOs instead. Some NEMA/SEMA staff also participated in some of the training provided to the IDPs, with the aim to observe, monitor, and verify if the IDPs understood the content. Sometimes the IDPs were encouraged to determine the types of training they wanted, and in turn, NEMA/SEMA identified organisations that could deliver them. The majority of training requested and offered related to life skill acquisition, for example, farming support and business skills. Some APMs added that contributions and opinions of children were also valuable and sorted after, especially unaccompanied children who had no guardians or relatives in the camps.

> *IDPs can add value. Even the children, you have to give them the opportunity. That will also give them confidence…. there are a lot of unaccompanied children that have no parent here – **APM8***

The process of involving IDPs included liaising with IDP leaders, before and during the planning phases. These leaders, in turn, informed the entire IDP camp populations and also helped limit communication challenges such as language barriers. However, this approach was mostly used in the formal camps. At informal camps, first interactions were directly between IDP representatives and supporting organisations/groups, but sometimes these organisations also briefed the entire IDP residents directly. As such, in informal camps, more IDPs were actively involved in intervention decision-making, where available

If the camp is on while the IDPs are in, in most cases, you form committees. And the IDPs… Each section of the camp has leader who are also IDPs. So, you liaise with them, otherwise you will not have a headway. The leaders speak on behalf of the IDPs. They play a major role… it is advisory role… there is this language barrier. You may not understand their language, but of you communicate with their leader, let him be the intermediary. – ***APM7***

6.6.3 Theme 3 – APM perceptions of IDP healthcare management

This theme explores the APMs' experiences and involvement in IDP health management procedures. It also describes some health interventions provided for IDPs and the criteria used to guide implementations.

6.6.3.1 APM description of IDP health management

APMs were clear in pointing out that health management for IDPs was the responsibility of the health sector committee. The Ministry of Health (MoH) headed this committee, while the LGA health teams, including the PHCs, usually executed field activities. The APM also stated MoH was responsible for health resource supply, while other organisations acted as support when required.

We do IDP health management too. UNICEF does that. And then some of these INGOs too they have established clinics in camps. Sometimes they do psychosocial support in these clinics. – ***APM1***

The APMs were not very knowledgeable about IDP health management processes and procedure, because they were not actively involved within that sector. However, they stated that from experience, the first point of call for health cases was usually CHWs and also referrals were common. Quite a number of cases were declared to have been referred to the secondary care

level, and this incurred costs mostly covered by managing authorities only in the formal camps.

> *Yes, there are health specific guidelines, but I am not in the medical team. We have a mobile medical team, we have a standby ambulance for cases of emergencies, but then if the IDPs are taken care of 100% if they have cases of illness and of course we know they are not financially buoyant. So if it is beyond what can be treated here in camp we refer them to hospitals outside, and then Federal Government takes care of the bills, be it operation, be it… no matter how complex the case is, as long as it can be treated, the cost is not a problem. –* ***APM1***

The APMs had no clear knowledge or awareness of any infectious disease management plan in use, or if any existed. Most insisted it was the responsibility of the health facilities to assess such risks. A few APMs stated outbreaks were mainly determined on observation of the cases and representative HSPs from MoH were assigned to most camps to monitor reported incidences, both formal and informal camps. However, since these staff did not reside in the camps but visited occasionally, there were delays in observing some outbreaks.

> *…that communicable disease risk assessment is the schedule of the health committee or health subcommittee in the camp. .... If it is a formal camp, it's easy to do that because health officials are there 24/7 so they know once there is a notice of any suspected issue of health that may lead to an outbreak, they address it quickly. But where they are just living within the communities, sometimes it takes time before they know.* ***– APM3***

Most APMs were of the opinion health problems were expected to arise once people lived in camps, considering their living conditions. This indicated that the APMs were somewhat aware of the health challenges experienced by

IDPs and the resulting health outcomes. However, this did not translate to the APMs being able to handle the difficulties identified.

> *…health issues must arise it can either be because of the kind of water they drink, because of the toilet facility there. They may be defecating openly and that is bound to create some health challenges. –* ***APM3***

The APMs highlighted vaccination was one of the main challenges needing significant attention. In most states, vaccination campaigns had never been undertaken, for instance, in Kaduna state. The assumed reason was since the camps were not considered formal, no standard plan for camp vaccinations existed in such locations.

> *We have cough and other minor sicknesses arising from maybe the condition of the camp. Some of them spread a blanket on the floor which is cemented to sleep, and the state is a very cold area. They may have cold that may lead to pneumonia. We try as much as possible to take care of such people to avoid this …. to protect them from having pneumonia… vaccine planning for IDPs is a health responsibility, we allow the ministry of health to do that. Where it is required, we quickly inform them –* ***APM7***

The informal camp factor influenced overall health-seeking behaviours and options of the IDPs, thus IDPs in these camps were stated to rely more on herbal remedies.

> *Here we don't have any, because we don't have a camp. Those are done in formal camps… this particular place now these people believe more in taking herbs… half of them here peddle herbs… –* ***APM4***

6.6.3.2 Health intervention planning and implementation

Although vaccination had not been done evenly in all camps, it was still the most commonly mentioned health intervention to have been implemented.

More vaccination activities were reported in the formal camps with support from key international partners, such as WHO and UNICEF. The vaccines were, however, geared towards 0–59 months old children and pregnant women.

> *…vaccination is given for children in the camp, and for pregnant women as well as proper education to avoid epidemic. –* ***APM7***

One APM was of the opinion that IDPs seeking incomes outside the camps acted as a barrier when trying to conduct assessments. This was because most IDPs were away from the camps during daytime hours; hence, accurate population number and needs were hard to ascertain. Also, since most on-site vaccination campaigns were conducted in the daytime, absenteeism implied increasing vaccination coverage was challenging. There were also other health intervention initiatives conducted alongside vaccination. These included health education and rallies for raising awareness, for instance, campaigns carried out during disease outbreaks.

Other interventions identified to have been offered in some locations included family planning, birth control, supply of food and non-food items such as mattresses, nylon mats, mosquito nets, buckets, and kitchen utensils. The APMs did not have any verifiable distribution records. A reason given for the lack of available records was that since the items were usually offered by partner organisations, reports were not always shared with state-level staff.

Another major challenge to intervention implementation mentioned by the APMs was, that since most IDPs had been in the state for over three years and were integrated into the community, they were harder to reach. In such cases, intervention activities were not considered to be urgently required.

However, APMs stated that even when IDPs were settled within the local communities they still needed food; hence, more support was continually sought after for them.

Some interventions had been planned to either address particular problems or cater for specific groups. An example was the project designed to tackle the loss of livelihood. One APM stated that an IDP "*victim support forum*" had been established for the IDPs to discuss various subjects, including their needs. A core need mentioned was for agricultural support; therefore, an intervention was developed to support the IDPs in agricultural enterprises through an Agro-based Livelihood Intervention project executed by an NGO.

> *Projects are planned for specific groups… we give this categorisation to know whether they are males, females, children, or infants, so that you can know whatever you want to design, whether in terms of providing food, means of livelihood, or skills acquisition... What we can provide for maybe 25 to 30, you cannot do it for a 10-year-old or 5-year-old. So this is why we do this particular categorisation, so whatever you want to provide that categorisation will help you plan well and deliver well. –* ***APM3***

6.6.4 Theme 4 – External healthcare partnerships

This standalone theme encompasses the APM's descriptions of and interactions with partners supporting the government on IDP health management.

As previously mentioned, both NEMA/SEMA were actively involved in soliciting for support and resources for the IDPs. They, therefore, played a crucial connecting role between the supporting organisations and IDPs. Most APMs confirmed that reports generated during assessments and camp visits

were the main tools used to determine IDP needs, design interventions and guide implementation.

> *…if we have IDP's coming we take an inventory to see what their basic needs are at that initial stage, then we do a recommendation to the head office of the state that we have this number of IDPs. All these categorizations I've told you male, females, physically challenged those with health issues and then we make our recommendation of what we see and support them.* ***– APM3***

NEMA/SEMA also benefited directly from the partnerships set up for IDP management. For example, through staff empowerment training and active skill development while working side-by-side with supporting international partners in the field during DTM data collection.

> *But the IOM theirs is to… take the DTM that is the Displacement Tracking Matrix… in the state…they are tracking the statistics of the IDP…And also the training of our staff… They train SEMA staff, NEMA staff and other stakeholders…we are going to have meeting to handover the project capacity building.* ***– APM8***

A few partnering organisations mentioned included government agencies (e.g. Ministries of Water Resources, Transportation, Justice and Works, and security institutions like the police, military and Civil Defence), international organisations (e.g. WHO, UNICEF, UNHCR, WFP, IOM, MSF and the Red Cross), other country government organisational support (e.g. Danish Refugee Council and Swiss embassy), local NGOs (e.g. TY Danjuma Foundation) and religious charitable organisations (e.g. Church of the Brethren, Mission 21, Stefanos Foundation and Hisbah). Academic researchers were also stated to visit frequently, but no information was provided on the types of research studies conducted. Partnership presence

varied across the IDP settlement states, but more religious and local NGOs visited the informal camps.

> *And we have a lot of students who are doing research work from either University of Jos and from Buruku Police Staff College... At times, they come here to get data and records for their research work. We give them whatever they want. Yes, because they believe that whatever information they get here is more authentic than from any other source.* ***– APM7***

Most partners had a technical focus or offered only basic supplies, such as food. Some examples of technical support provided included vaccines from WHO and UNICEF; rapid health first aid responses by the Red Cross; provision of skilled health staff and medical specialists such as consultant doctors by MoH; and security by the military, police and Civil Defence. The collaborations demonstrated a wide range of stakeholders were involved in IDP management. But in some cases, this multiple-involvement resulted in supply overlap, hence stronger coordination systems were essential.

> *…capacity partners are involved is specialise their different and individual fields…. each sector there is a lead in whatever humanitarian assistance they can do. Like UNHCR is the lead in shelter, let's say WASH programme that is house and environment sanitation. So IOM is also on shelter but UNHCR has been in charge. So we notify them that we have new arrivals, so they now start making plans to provide shelter, sometimes we provide shelters too. –* ***APM1***

6.7 Comprehensive discussion

6.7.1 Main findings

The qualitative study explored camp and health management perceptions of IDPs and local stakeholders in north-east Nigeria. A crucial finding in this study was the need for the government to first recognise IDPs as an important priority. All participants were of the same opinion that the national government was responsible and accountable for the wellbeing of IDPs. Yet, the IDPs were of the opinion they were poorly acknowledged by both the government and neighbouring non-IDP communities.

Camp management varied widely between formal and informal camps, and in turn, increased inequality in accessing needed resources. Criteria for determining camp status as formal or informal was largely influenced by finances, but the government generally did not recommend the establishment of camps. Other management influencing factors included camp type and staff capacity. Extended duration in camp-settings impacted camp management, as suggested where management processes such as registration and food distribution reduced with time. Most resources were not provided by the government but by international and local NGOs, especially the health-related services. This NGO humanitarian support was also unevenly distributed across the camps and IDPs in informal camps were at a disadvantage.

Management and coordination of IDPs were mainly done centrally at the national level. Although such centralisation was good for accountability purposes, it often contributed to delays in getting resources across to the IDPs. Furthermore, promises and pledges made to informal camps were

mostly unfulfilled, due to poor follow-up and weak organisational oversight which were linked to the shortage of staff.

Leadership structures existed in most camps through functioning IDP committees and external CM support in the formal camps. All participants affirmed that IDP involvement in management was of great value both for the institutions as well as the IDPs. Hence, IDPs were often involved in camp management and interactions with external organisations, for example, during intervention planning and delivery.

Despite several common diseases occurring in the camps, the majority of locations lacked sufficient medical resources and access to skilled health staff, for example, doctors. Consequently, IDPs had to visit secondary care facilities (hospitals), mostly based on referrals, and this was slightly complex. Formal camps had better referral systems through government aid; while in informal camps, the extra personal cost implications caused IDPs to resort to alternate or substandard options. Unfortunately, these alternatives offered no health improvement guarantee and sometimes resulted in high rates of health complications.

Despite all the expressed challenges, the IDPs had learnt to adapt to their current situation, by setting up techniques for managing their affairs, advocating for their needs and supporting each other. These traits exhibited positive resilience towards surviving their current phase of life.

In summary, after integrating the themes and subthemes from all participant groups, two overarching themes emerged. These were – *"camp location, administration, and resources"*; and "*health experience, services, and*

partnership". These core findings are considered in the following sections within the context of existing literature.

6.7.2 Camp location, administration, and resources

Camp status was the most significant influencing factor for both resource provision and management approaches, and differences in access to humanitarian support created inequality gaps between formal and informal camps. Similar selectivity in the provision of resources has been reported in other settings.[296,297] Martins et al. assessed the impact of malaria response in Timor-Leste and revealed policymakers reported carrying out targeted and, sometimes, incomplete distribution of resources.[297] The study, however, focused only on urban locations and the authors indicated that the high amount of large-sized IDP camps within the capital city presented a specific challenge; therefore, the intervention required a comprehensive but focused plan.[297] This challenge may be reflective of the FCT camps in this study, hence the attempt of the government to disband the IDPs in those locations. In another study by Hynes et al., it was revealed that food rations given in camps were slightly influenced by the responsible organisations.[178] This observation elaborated how organisations had the ability to integrate relevance and fairness in the provision of resources.

At the individual IDP level, Robert et al. showed that reduced access to farmland for personal and commercial use affected both the mental and physical health of IDPs.[261] The study, however, used a cross-sectional methodology and therefore, could not infer a direct causal association between the two factors. However, the findings aligned with the review on social and political dimensions of internal displacement in Uganda, which

showed possession of lands was a key determinant of belonging, identity, livelihoods, resettlement, poverty, and disputes in camp settings.[271] For that reason, contextual considerations, both at organisational and personal levels, need to be taken into account when managing internal displacement situations.

The difference in CMs by camp type was reflected in observed management variations. This was shown where formal camp CMs were more knowledgeable than their IDP chairmen counterparts, especially in their awareness of management guidelines. IDP internal leadership structures were, however, mostly similar in all camps. Therefore, the main distinguishing factor for camp management was the presence or absence of external administrative support, and this has been shown to influence the effectiveness of interventions in internal displacement conditions.[54,298]

Camp coordination, which involved overseeing humanitarian responses, was detected to be weak. To strengthen both camp management and coordination national authorities are required to acknowledge and execute their responsibilities to IDPs,[5,299] especially in Nigeria.[111] This includes legalising the national IDP policy and implementing a standard national framework for IDP management across all IDP settlement states.

The tactics adopted by the government to avoid establishing camps and to limit long-term camp dwellings (by restricting provisions to camps) have been observed in other protracted conflict settings.[240,300] A study on the impact of long-term displacement on health and wellbeing revealed that after a period of time, widespread needs in other disaster and conflict settings detracted funding and interest away from IDPs in Bosnia-Herzegovina.[240] Consequently,

the longer camps existed, the less management oversights were provided by the authorities. This was comparable to the findings in this research. A similar view was described by Hynes et al. who reported that newer camps had more access to resources and better health outcomes compared to older ones, and the differences were attributed to lack of funding required for managing camps.[178] The study by Hynes e al. however focused on reproductive health services, which are more capital intensive and required significant amounts of funds.

Based on the draft IDP policy and contrary to the research findings, the assigned lead agency for IDP management was the National Commission for Refugees (NCFR).[108] Although NEMA was mentioned in the policy as one of the key organisations and is expected to assume certain responsibilities, engagement of NCFR was not mentioned by any study participants. This indicated NCFR was not as active as NEMA, nor did they assume the responsibility of lead national IDP management agency. However, as mandated in the draft policy, NCFR has now changed its name to National Commission for Refugees, Migrant and Internally Displaced Persons (NCFRMI).[301] This showed the organisation had taken action on the proposed policy, albeit not completely.

Overall, NEMA struggled with getting sufficient resources needed to meet IDP needs, including field staff. These factors may have contributed to the lack of direct administrative support for all camps. Regardless of financial challenges, Salama and colleagues were of the opinion human resource shortage in displacement settings were also influenced by government willingness.[174] The authors further elaborated that although national governments were

responsible for the protection and provision of basic services for IDPs, most were either unwilling to prioritise or lacked the technical capacity to do so.[174] This could be inferred in the observed weak involvement of government institutions in this study. As a result, the government relied more on a joint management approach using multiple national and international organisations to bridge capacity and resource gaps.

6.7.3 Health experience, services, and partnership

Similar to the audit and survey, perceived critical health challenges were related to communicable diseases and lack of resources. All participant groups were mostly unaware of the causes of death. This could be associated with the lack of skilled HSPs, appropriate services to diagnosis causes of mortality and morbidity, and poor record-keeping.

Previous studies have shown health staff inexperience, and the absence of health management protocols contributed to poor health outcomes among displaced populations; and also to an overall weakness in healthcare monitoring process.[171,178,302–304] For example, in the study by Siddique et al. on why treatment centres failed to prevent about 12,000 cholera deaths during an outbreak in a displacement setting, revealed that the inadequate experiences of health workers to manage severe cholera was associated with the failure to prevent most deaths.[302] The publication was, however, based on an outbreak of cholera in 1994; hence, an outbreak of similar magnitude in this time period may have more experienced staff to manage it. In light of this, approaches to healthcare during displacement, appear to be more reactive and this present severe risks when associated with infectious and chronic health conditions.

Similar to the findings in this study, observation of camp healthcare services being limited to only formal camps was demonstrated in the qualitative study by Chi et al., where IDPs expressed a desire to relocate to government recognised IDP camps because those settlements had more access to health services.[282] Additionally, implications from personal cost demand needed to access care outside camps, and long distances to health facilities, have also been reported as barriers to accessing healthcare services and intervention uptake.[303,305–308] The review by Mendelsohn et al. showed that lack of transportation and inflated costs were identified as barriers to accessing treatment, while personal commitment and health worker support facilitated access to HIV treatment uptake.[305] As the focus of that study was on HIV, the implication of both factors may be different for less sensitive or chronic illnesses; nevertheless, these were likely applicable to other health problems.

Involvement of various stakeholders in IDP healthcare, especially international organisations offered several benefits.[54,298,309] For example, the cluster approach system in Uganda, as reported by Olu et al., improved humanitarian response and health coordination.[54] In this study, the health cluster partnerships were also overseen by MoH.[54] However, external organisations sometimes had personal objectives and tended to prioritise emergency humanitarian relief over long-term health system strengthening.[134] This fact may have contributed to the weak involvement of HSPs and APMs in IDP health management. Hence, partnership collaborations in Nigeria may need further refinement. As explained in the study by Olu et al., this would require predictable funding and political commitment.[54] In addition, strong coordination which combined health system strengthening is essential for improving IDP health management.[54,298] Nonetheless, regardless of the level of support

provided, other studies show both comprehensive and partial external support were associated with a higher likelihood of improved health service provision in displacement settings.[54,310]

6.7.4 General observations

Usually, locations closest to conflict areas had the highest proportion of displaced populations and destroyed facilities, so needed more health service support.[298,310] This may be the reason why the camp in the conflict zone in this study (Bakassi camp) had more resources. This was, however, an insufficient reason to under-prioritise other locations, especially as global and national IDP policies recommend that all IDPs irrespective of their conditions were to be protected.[4,108]

Despite the lack of services, the IDPs showed high levels of resilience by adapting to their conditions, locations and establishing internal management structures. Even so, personal and community resilience were often insufficient for overcoming social and environmental barriers.[44,311] Consequently, IDPs were more vulnerable to long-term health difficulties which could last years and beyond the crisis period, for instance, mental health problems.[44,174,312] An example is shown in the study by Lopes Cardozo et al., that revealed IDPs in Kosovo suffered more long-term traumatic events than refugees, and this was associated with higher rates of psychological morbidity.[312] The study, however, was conducted about two years after the crisis in Kosovo, therefore may not truly reflect the impact among IDPs displaced for extended periods, like in this study which had IDPs displaced for up to five years. Nevertheless, another study carried out among IDPs displaced within 20 years in Sri Lanka, also showed high levels of mental health conditions such as anxiety,

depression, and PTSD; and factors associated with these included unemployment and food insecurity.[313] To counter similar long-term effects in Nigeria, more proactive interventions and support are required to improve the overall health and wellbeing of IDPs.

6.8 Strengths and limitations

Due to time and security constraints, a reduced number of interviews and FGDs were conducted because the field team could not revisit some locations. During the FGDs, some IDP chairmen often dominated the group discussions, and female participation and responses were low. The poor attendance of females in the FGD was because most IDP leaders were male, and the few female leaders were not very vocal. Furthermore, all the CMs and APMs were males, exhibiting the patriarchal culture of the region.

Formal camp CMs were more knowledgeable about camp management than those in informal camps; hence this may have impacted the variability of the findings. Also, limited numbers and experience of HSPs restricted the exploration of several healthcare services. Consequently, the results may not adequately reflect all genders and participant groups; hence, they may not be generalizable to every IDP setting. In spite of these, the data collected for each participant group reached a point of saturation, as all the essential information required for this research were collected.

To reduce the imbalance effect from the disproportionate representation of gender and uneven participation, transcript excerpts were presented by camps, gender, and participant roles, where necessary. Furthermore, sample quotes were drawn from all FGDs to ensure adequate representation, data neutrality and transparency. Although the study was based on one-time face-

to-face interactions, observed high degree of saturation in the findings from different groups ensured all key points of the study were well-covered.

Regardless of the identified challenges, this study which is the first comprehensive qualitative study on IDP camp and health management has several strengths. The novelty of the research provides insight into the national authority's IDP management approach, as well as how the IDPs and other stakeholders handled the effect of displacement. The study also identified several management gaps, especially in health-related services, and presented evidence on the wider impact of IDP settlement on management and vice versa

6.9 Conclusions

Perceptions of the national authority regarding camps influenced both management approaches and resource provision, and this impacted the availability of resources for IDPs. High reliance on NGOs and INGOs for IDP health management appeared to limit emphases placed on the national institutions to take on their full responsibilities. For the health of IDPs to be protected, the government needs to acknowledge the existence of all IDPs and include all locations in the administrative and management processes. This may not necessarily mean establishing more formal camps, but rather setting-up of standard mechanisms for documenting, advocating and monitoring informal camps proactively. In addition, regardless of camp status, more basic resources and healthcare services need to be provided.

7 INTEGRATIVE DISCUSSION

7.1 Summary of findings

This section reflects upon findings from the three studies (audit, survey, and qualitative components) comprised within this thesis as conducted to address the study objectives. Overall, the research aimed to assess the availability of health-related services and explore perceptions around IDP health management processes in Nigeria. Observations from the mixed-methods data collected, supported by the systematic review in **Chapter 2**, showed extensive gaps in IDP camp and health management.

Results from the first study (camp audit, **Chapter 4**) revealed significant differences in the environmental conditions and resource availability by camp type. This was supported in the second study (survey, **Chapter 5**) that assessed individual IDP health outcomes and resource utilisation. Although the health outcomes identified were similar in all camps and were mainly communicable and environment-related; variation by regions was obvious with the north-east reporting more non-communicable health conditions. Several resources were shown to influence the likelihoods of falling sick in the camps; this included toilet types and accommodation household sizes. The last study (qualitative component, **Chapter 6**), which explored various stakeholders' perceptions of IDP management, provided contextual information explaining the findings from the first two studies and also showed how the observations were linked to management protocols. The most influencing management practices were the government's prioritisation of the north-east over other regions and the channelling of most resources to camps considered to be formal.

This chapter, therefore, aims to address the research objectives by triangulating the findings from all three studies within a global context; present the thesis contributions to what is already known and outline the overarching research challenges, strengths and limitations.

7.2 Addressing the research objectives

7.2.1 Essential vaccination provision and coverage

Findings in this research showed minimal vaccination had been offered to IDPs in the camps, despite feedback in the qualitative study reporting vaccination services were the most common health interventions offered.

The survey revealed none of the assessed national EPI vaccines met the WHO requirement of 90% coverage.[314] Also, as shown in the audit, coverage by camp varied since vaccination had not been administered in most sites, especially in the informal camps. This was a fundamental public health concern as a previous study discovered most children who had not received routine vaccination in Nigeria were clustered in the north-east, the conflict zone.[315] Consequently, displacement of IDPs to other regions increased the risk of disease outbreaks in those locations.

Vaccines against polio and tuberculosis had the highest coverage. This was particularly encouraging since the burden of both diseases were high in Nigeria and also of global concern.[316,317] Nevertheless, achieving stronger herd immunity required meeting the WHO targets for each vaccine[292] which was not the case in this study.

The observed poor vaccine coverage could be explained by findings in the qualitative study that showed vaccines for IDPs were not primarily provided by

national government institutions but through external organisations. Thus, in camps with little or no external support, access to vaccination services were limited. Also, poor knowledge among HSPs influenced vaccination schedule, as shown where HSPs determined camp vaccine needs by the influx of IDPs (numbers arriving) as opposed to individual vaccination history.

As also described in the qualitative study, women and children were more prioritised when it came to vaccination initiatives. This was also evident in the survey findings, which showed a higher vaccine coverage in both groups compared to the general IDP population. Unfortunately, the HSPs had no information related to general camp population vaccination activities to support or dispute the survey results. Since evidence of vaccination, provision was lacking and all the IDPs were susceptible to various infectious diseases, as shown in the survey, observed gaps in vaccination indicated health implications for groups exempted from most vaccination services, especially adult males.

Although the identified vaccine prioritisation approach (pregnant women and children) is recommended and population-level vaccination has been recognised to be challenging in displacement conditions,[181] there are certain vaccines regardless of displacement status, advised for all age groups especially against diseases endemic in the region.[176,292] From the Nigerian EPI list this included BCG, typhoid, tetanus, hepatitis, cholera, measles and meningitis vaccines.[292]

The poor vaccination coverage detected may also have contributed to the higher proportion of reported typhoid cases among the 18-69 year old age group. Thus, as shown in previous studies, displaced adults were also

susceptible to infectious diseases.[127,181,318] As a result, some authors have argued that prioritising flexibility around age and other eligibility criteria for receiving vaccines were essential for preventing outbreaks among populations living in conflict and humanitarian emergency settings.[316,319]

7.2.2 Availability and utilization of basic health-related resources

The audit and survey studies presented specific gaps in health-related resources, such as lack of skilled health workers, and utilization at camp and individual levels, respectively. Similar shortfalls were detected in other conflict settings as revealed in the systematic review **(Chapter 2)**, as well as in other studies in Nigeria that reported most IDP camp conditions were inadequate for their needs.[97,320,321]

Distribution of available resources was either uneven, delayed or insufficient. The APMs elaborated extensively on this, indicating the primary reason was the government's narrowed attention when providing support as shown in the prioritisation of formal camps. The resulting effect of this shortage, evident in the FGDs, was the increased use of resources from neighbouring non-IDPs communities, such as water and farmlands. This finding implied resource challenges, directly and indirectly, affected both IDPs and non-IDP communities. Similar observations were reported in other studies.[322,323] For example, in a study conducted in Nigeria, Onaedo et al. stated that where IDPs struggled for the same resources with non-IDPs, this created a strain on both sides.[322]

During the FGDs, IDPs elaborated that the resource of most concern to them was food, which they believed had caused a few deaths. Similar findings were identified during the interviews with other participants. Perceptions on lack of

food contributing to mortality were likely true considering the food shortages displayed in the lack of poverty-related interventions in the audit, poor food rationing in the qualitative component; as well as the low feeding frequency and high prevalence of diseases shown in the survey. These findings supported the view that populations affected by food scarcity were more susceptible to diseases and death, due to the association between undernutrition, severe malnutrition and communicable diseases.[273,323] Furthermore, poor record-keeping and monitoring displayed in the interviews made it difficult to ascertain the true extent of the problem, which in itself serves as a barrier to getting support groups and relevant organisations to take notice and action. Consequently, complications from these different layers of need, the resulting outcomes, and management difficulty contributed to why the country is currently categorised as being in a Grade 3 emergency.[114]

Despite the high predisposition to falling sick, the audit revealed significant gaps in available health resources compared to the recommended Sphere minimum standards, as shown with 4 of the 5 assessed health standards being unmet. This revealed that requirements needed to tackle the health outcomes identified in the survey were significantly lacking, for example, the availability of drugs and medical supplies. These health service management gaps were confirmed in the HSP interviews through the significant shortage of health staff, the inexperience of available HSPs, and lack of health management protocols. Consequently, since most camps had no HSPs (residing in camps or visiting) or fully functioning health facilities, IDPs were solely responsible for their healthcare management.

The qualitative study revealed seeking appropriate healthcare had financial implications, and IDPs mostly paid for these services personally. The IDPs further explained that when health services required payments or long-distance travel, they often compromised by skipping proper treatments and opting for self-recommended care. Strategies used to avoid the economic burden resulting from accessing medical services contributed to the adoption of unsafe and unconventional healthcare approaches. These attitudes likely influenced their health outcomes and contributed to the observed high disease prevalence. As a result, these observations characterised a situation of high-level of needs among the IDPs but weak supply of supporting resources; and also illustrated a noteworthy relationship between health outcomes and economic challenges. Consequently, poor access to health resources could also be considered a health risk factor for the IDPs. Evidence of this was further implied in the survey where persisting long-term condition contributed to the higher likelihood of falling sick. A similar observation was reported in the 2017 Nigerian HNO, where the high out-of-pocket expenditures, user fees and lack of income translated to negative coping strategies such as eating less food and significantly higher levels of acute malnutrition.[75] In addition, studies in other settings have shown personal expenditure was a significant barrier to accessing healthcare and this was further influenced by location.[59,324,325] Similar observations were also identified in the survey where poorer health outcomes in informal and dispersed camps were evident.

Overall, the uneven distribution of services and resulting health outcomes had a more negative impact on the informal camps. Other studies have reported similar findings as illustrated where health outcomes among IDPs living in camps were poorer and this often impacted their health status.[153,244,326] Also,

the review by Porter and Haslam indicated that IDPs living in temporary accommodations, like transit camps had worse health outcomes,[244] as identified in this research too.

7.2.3 IDP camp and health management practices

Feedback from the APMs suggested that the human displacement outcome from the Boko Haram crisis took the national authorities by surprise, and findings from all the studies indicated extended stay of IDPs in camp-like conditions created further challenges.

The APMs described the decentralised IDP management structure at two levels: National (NEMA) and State (SEMA).[327] However, not all SEMAs were actively involved in IDP management and most lacked the capacity to carry out the related responsibilities. This finding might be linked to the autonomy granted to individual SEMAs to make its own rules and regulations for their states.[65] Hence, in the absence of a legally binding National IDP policy and effective management protocol,[108] IDP responsibilities could not be enforced. Therefore, general management approaches lacked proper accountability mechanisms,[328] as observed in the qualitative and audit studies.

Adherence to recommended management principles, as described in the Sphere handbook and other related guidelines, were very poor. Evidence of this was shown in the audit where only five of the 15 assessed Sphere minimum standards were “partly met”. This observation revealed a link between poor camp management and partial neglect from the national authorities, and also inferred weaknesses in IDP management as shown in previous studies conducted in Nigeria.[67,98,100]

The APMs declared both national and state-level organisations faced financial and human capacity limitations, which explained the lack of administrative and healthcare staff. This finding illustrated why most camps were managed by only IDPs, as shown in the audit and interviews with CMs. Hence, this research highlights the vital role of finance in IDP management processes. Further evidence on economic influence was observed when APMs indicated poor funding affected the government's capacity to establish camps, provide adequate resources and offer sufficient healthcare referral support for the IDPs. The observed financial challenge mirrored the economic struggle in the country, as Nigeria had been in an economic recession with declining national income since 2016. As such, provision of free health services was not always feasible.[329–331]

Similar financial constraints and the impact on health interventions are common in humanitarian crises.[164,332,333] For instance, Hakamies et al. stated that although material and human resources were significant constraints, the main challenge in the provision of healthcare to IDPs was donor influence.[332] Consequently, several funding mechanisms are generally recommended and was considered in the draft national IDP policy. These included a joint humanitarian fund, flash appeal funds, grants and loans; and through individual institutions and government agencies.[108] The identified financial gap also influenced the recent establishment of the country-based funding stream, the "Nigerian Humanitarian Fund-Private Sector Initiative" in 2018.[334] This fund was developed to establish a resource pool to actively involve and encourage Nigerian companies to support the government and the United Nations in providing resources needed to tackle the humanitarian crisis in the north-east.

Generally, populations settled in locations closer to ongoing conflicts are more difficult to reach due to security challenges.[9,144,154,158,163] This research, however, identified a contradictory finding as the camp located closest to the conflict had the most support, as shown in the audit. This observation may, however, not be generalizable, as the sample for this study was limited to 0.05% of IDPs, and the research did not assess all IDP settlement sites and states. Nevertheless, this contrast showed access to resources was complicated and pointed to the major determining factor, “finance”. A similar observation was reported by Tunçalp et al., who showed that levels of conflict and displacement were associated with the availability of critical services.[310]

Weak national government capacity resulted in the engagement of other non-governmental agencies. The APMs revealed international and local NGOs were used to increase the national authority’s capacity, as well as minimise both resource and management gaps, as shown in the feedback from the CMs and HSPs. These findings supported the evidence in the review by Akl et al., which specified the involvement of external management in camps equated to better camp conditions.[335] Although the comparative study by Eweka and Olusegun on IDP management in Nigeria and Cameron showed international responses in Nigeria were inadequate.[118]

The importance of data for effective planning and coordination of intervention implementation has been elaborated upon by various studies.[30,148,149,157,158] However, proper record-keeping was weak in this research as exhibited in the different studies. For instance, this was shown in the audit where the CMs were unaware of the average camp population size, in the survey where the IDPs had no vaccination cards, and among the HSPs who kept no medical

records in the qualitative study. Such data gap, in addition to the limited assessment conducted, indicated intervention decision-making were not fully evidence-based, and this may have led to the uneven distribution of resources. Absence of a national IDP policy may have also contributed to the weak monitoring, as shown in other countries where non-implementation of a national IDP policy impacted the approaches used in aid implementation.[336,337]

At the IDP level, the existence of functioning IDP leadership committees enhanced internal camp management. Evidence of this was displayed in the survey and qualitative studies. Despite the identified gender imbalance among IDP leadership, as shown in the FGDs where some camp committees exhibited a patriarchal culture, IDP leadership committees were effective management platforms. As such, internal management between the IDPs, as observed in this research, had better structures than most external coordination. With a bit more training, IDP internal management could be significantly improved and the IDPs could also contribute to external management processes. As described by the APMs, this was already evident to some capacity, as shown where IDP leadership structures were often harnessed for certain intervention planning and implementation activities.

IDP coping mechanisms and mitigation measures showed they had developed their own management strategies, such as the use of TBAs in place of HSPs. This supported the recommendation for IDP community-based protection approaches,[5] and previous studies have also indicated the importance of community-based interventions through active involvement of affected populations.[121,143,316] The review by Ehiri et al., on the use of displaced persons as HSPs, showed that this strategy increased service

coverage, health knowledge, disease prevention and treatment-seeking behaviours.[338] Furthermore, a previous study on IDP issues in Nigeria also recommended that the complex nature of problems associated with IDP camp management required more interdisciplinary approaches.[339] However, the use of TBAs as sole health providers presented some risks, as indicated by Bucher et al., who stated most TBAs used inappropriate or outdated practices.[243]

An interesting finding in this research was the importance of education. Although it was not a statistically significant risk factor for falling sick in the survey, it still played a major role in other areas. For instance, the FGDs revealed that education level was one criterion considered when selecting IDP leaders. Also, the absence of health education in the audit was related to poor health promotion and protection awareness; and the survey showed an association between the related poor hygiene practices and health outcomes. Furthermore, interviews with other stakeholders showed lack of training influenced management abilities. For example, the inexperience and minimal training of HSPs' contributed to their inability to track, diagnosis and properly document health outcomes. Previous studies also identified similar associations, as shown where camps with no health education had poorer living environments and unsafe hygiene practices during food and water handling.[221–223] While other studies demonstrated that improved health education and awareness, increased intervention uptake among IDPs.[144,158,160,315]

7.3 Thesis contribution: What this research adds

To reiterate, IDPs unlike refugees are the responsibility of the affected country's national authorities.[4,5] Countries with high displacement issues, especially in Africa, experience comparable challenges usually related to poor IDP management structures.[118,271] Furthermore, public health consequences of displacements, which include high mortality and morbidity, are not always well documented, especially in the Sub-Saharan African region.[37,38,42,43,340,341] Considering, the continuous increase in global displacement,[7] it is crucial to bridge the gaps in IDP management. This is particularly important since the vast majority of affected countries do not have internal displacement laws or policies needed to guide both national responsibilities and international engagements.[342] Evidence presented in this research revealed the context of this, from the Nigerian perspective. Although focused on only one country, the findings have broader relevance as all human displacement challenges inevitably contribute to similar health and social burdens.[121]

Public health impacts of internal displacement are not fully understood, and the fundamental challenge of identifying these in conflict settings is the weakness in health information systems. This research significantly contributes to the human displacement field of study, as particularly related to IDPs. It presents the first major examination of IDP experiences and health outcomes in relation to national management approaches, and it clearly outlines the relationship between IDP needs and national internal displacement policies.

The research also displayed how selective execution of national responsibilities impacted IDPs settled in informal camps. Observed gaps in

needs and the absence of an IDP policy, demonstrated how non-compliance with recommended policies contributed to the needs and rights of IDPs not being met. Consequently, this research argues IDPs in prolonged displacement and settled farther away from the main conflict location should not be forgotten; and also clear IDP public health policies need to be developed and implemented to improve the wellbeing of IDPs, especially in countries like Nigeria.

These findings, therefore, provide significant insights required for the development of global strategic displacement goals. It also supports broader efforts being made to promote the responsibilities of national authorities in IDP management. Hence, policymakers, public health officials, and affected populations would benefit from understanding the effect of management on the health and wellbeing of all those affected by displacement crises. Deeper insights of these healthcare needs and IDP management approach, as presented here, would therefore help guide the prioritisation of scarce global and national resources.

In summary, this research provided information and contributed to existing knowledge in five ways:

a) Identified that IDPs settled in regions outside the north-east zone in Nigeria were generally excluded from active humanitarian support.
b) Highlighted the gaps between IDP resource provision and international minimum standards.
c) Added to the evidence base on the impact of weak government engagement in IDP management.

d) Identified the potentials in using IDPs to improve camp management and increase human resource capacity.
e) Identified information that can be used to supplement the health-related components of the national IDP policy before it is fully adopted; as well as offer guidance to support planning and prioritisation of IDP interventions.

7.4 Strengths and limitations

This was the first study to assess IDP access to resources and camp management processes in relation to their health outcomes in Nigeria. Previous research in similar settings have utilised mostly one method of data collection, and in some cases two methods (survey and qualitative), but none have been identified to include a comprehensive audit assessment as well.

The importance of adopting a mixed-method data design, including a camp audit, was reflected in the findings presented within this thesis. However, there were some challenges encountered while conducting the research. Most of these were associated with the ongoing status of the conflict, research planning, fieldwork duration, logistics, and local culture.

The high-risk nature of the study and the possibility of IDPs dispersing at any point in time, motivated the researcher to commence data collection just before the PhD official start date. Consequently, the research methodology and tools used were not adequately guided by skilled statisticians and qualitative research methodologists. This affected the data collection protocol as observed in the unconventional sample size estimation and lengthy interview guides; and thus, showed slight weakness in the research standard procedure. However, the inclusion of over 10% contingency in the survey and

use of inductive qualitative data analysis, minimised any related study reliability limitations. Also, the research included more camp sites compared to other IDP studies as shown in the systematic review, where the sample settlements included in primary studies were between two and four camps.

Security challenges, atypical to conducting any research in active conflict regions, affected data collection in Kaduna and Borno states because the research team had to evacuate the locations early. Also, several IDP settlements were inaccessible and direct observation of resources during the audit was not always possible. Both factors affected the sampling protocol and likely introduced selection bias and may have affect the generalisability of the findings.[343] However, the nine camps visited represented all IDP settlement regions in the country and approximately 8,000 IDPs living in camp-like settings. Furthermore, the use of different study designs validated all the findings. Extra samples from other states in the same region and exceeding the target sample size, also ensured the population for each zone was well represented in the survey.

Resource constraints limited the field study duration; therefore, extended and repeated face-to-face data collection could not be conducted. An alternative was considered for misplaced data through the use of phone interviews for lost audio recordings. But the NGO interview component, initially designed for after preliminary analysis of the three studies, was removed. As a result, NGO related information in the research was not verified. This may have affected the sensitivity and precision of the data provided. Improving sensitivity would have meant interviewing more people which would require more time and finances. Despite these, data collected for the research, which included four

different qualitative studies; and from the systematic review, provided sufficient NGO related information. Also, the research core focus was on the IDP community and national management, not necessarily the non-governmental perspectives.

Bearing in mind the rapid changes in humanitarian conditions, data used in this research may not be valid at the time of thesis completion, and may not be fully applicable to the current IDP situation in the country. Hence, objectivity needs to be considered when reflecting on the findings and making generalizations to other settings both in Nigeria and globally. However, the evidence presented in this research provides in-depth understanding around healthcare needs of IDPs, information that could guide the development of innovative intervention strategies, and the need of continuous evaluation of displaced populations; all of which can be useful at a global level.

The systematic review showed adaptation of study tools from multiple sources was common practice in humanitarian settings. This research adopted a similar approach to ensure consideration of all critical areas related to the study objectives. Despite the simplification of the study instruments from international guidelines, some participants still found them too difficult. This may have introduced some measurement errors due to reference misinterpretation[343] and also affected the validity of the feedback provided. It is therefore acknowledged that further cultural adaptations of the study instruments may be required. However, triangulation of the findings from each study was used to minimise the effects of these on the validity of the entire research.

Language barriers meant a few interviews were not conducted in English language. Carrying out direct translations may have affected validity and accuracy by introducing interviewer bias during the interpretation process when the survey was conducted, and misinterpretation during transcription of the FGDs and interviews.[344] However, multiple training conducted for the interviewers, different stages of data transcriptions and reviews; and data triangulation from the different studies, minimised the associated interpretation bias effect.

Since all data provided for the research were based on self-reports and individual perceptions, the findings were subjective and presented an element of respondent bias as well as affected the reliability of the findings. For instance, vaccination history could not always be verified due to the absence of vaccination cards. The research, however, did not aim to measure immunisation, i.e. completion of vaccine courses, but rather to assess the reach of the vaccination services. Therefore, the study focused on the context of vaccination life history. Nonetheless, weakness in vaccination evidence was accounted for by interpreting the findings from different perspectives and harmonising the results to ensure valid representations.

Furthermore, to guarantee the research findings were reliable and credible, good mixed-methods methodological practices were employed in the design stage all through to the write-up phase, as described in the reflexive statement. This included qualitative quality control through bracketing of the researcher's personal view, basing the research on a philosophical perspective, using inductive analysis, constant comparison and double coding with supervisors. In addition, specific mixed-methodology strategies such as

data reduction and integration were applied by first presenting the findings individually and later using them to complement each other.[215,345]

Finally, although mental health is a crucial factor for consideration among displaced populations, this research did not collect any related data. This was because the skills and expertise required to collect such data were beyond the capacity of the researcher. Thus, the findings in the study do not represent all possible health outcomes experienced by IDPs. Although, the researcher endeavoured to present IDP perspectives and descriptions that represented their emotions where possible.

Despite all the listed challenges, the use of a mixed-method study approach showing both camp and individual-level information presented the IDP health management processes from a wider perspective. The camp audit data and individual quantitative findings revealed the impact of the environment on IDPs, and this was validated through the opinions shared in the qualitative section. Yet, all of the research components were given approximately equal emphasis. This was demonstrated through the expansion of individual perceptions and integration at different stages using investigator triangulation, achieved by engaging different reviewers[193,346] As such, inferences from the quantitative data counteracted possible bias and stereotypical assumptions. While the qualitative data helped explain the situations and reasons for observations in the survey and audit. The qualitative study also identified weaknesses in the IDP management processes. Hence, each section of the research was complementary to each other and ensured the research presented a robust outlook of the IDP health-related management processes in Nigeria.

8 CONCLUSION

8.1 Research recommendations and further work

This research was conducted in order to explore and assess the healthcare management of IDPs living in camp-like settings in Nigeria. The study highlighted the availability of essential healthcare services among the IDPs in relation to their health status and existing management procedures.

Insights from this research can be instrumental in providing better knowledge of the global displacement issues and deeper understanding into the IDP phenomenon. The findings can be used to generalise and/or to develop theories to help effectively and efficiently manage the growing IDP crisis. The findings also have several public health and policy implications to be considered, which include developing standard guidance for health program design, implementation, monitoring, and accountability.

To minimise the IDP healthcare crisis and management gaps in Nigeria specifically, but also in other similar settings, the following recommendations have been suggested from this research:

8.1.1 Recommendations

a) **Policy review and adoption**: The Nigerian national IDP policy needs to be adopted into law to encourage adherence to recommended standards. The national legislative authority who would be responsible for this, as well as all organisations listed in the draft policy, need to take on a more active role in IDP management. Also, more health-related guidance need to be included in the policy. This could include a

framework for community engagement and local healthcare mobilisation during emergency and post-emergency crises.

b) **Extend and improve national authority involvement:** Government commitment to IDP management needs to be amplified and should include IDPs in all locations, especially for healthcare. For example, the humanitarian health coordination structure and disease surveillance established in the north-east could be extended to other IDP locations to enable evidence-based decision making. Furthermore, more active strategic planning and enhanced coordination from the government would be required to reduce the burden on the IDPs.

c) **Innovative, proactive and integrated interventions**: Health-related interventions provided for IDPs need to affordable, adaptable and offered prior to the worsening of their health status, where applicable. To achieve this, more camp-level prevention interventions like vaccination, health education and the provision of food and WASH facilities are highly essential. Although providing these interventions to every IDP would be a challenge, integration of the services into already existing structures such the local health service and national EPI program, as well as the combination of different components into single interventions would improve cost-effectiveness. Furthermore, interventions need to take into consideration local population characteristics, culture and preferences to enhance their relevance. This could be achieved through the active inclusion of IDPs and host-communities during intervention planning phases.

d) **Improved monitoring and evaluation practices:** The government needs to first recognise IDPs as being important and then strategize

ways to enforce proper monitoring mechanisms. This would be easier to execute when the IDP policy has been fully implemented. Another way to improve monitoring and evaluation is to include both into all intervention and management planning frameworks. Hence, camp visits could be more structured, better informed and designed to achieve several outputs per time. This approach would increase assessment coverage, improve data quality, help keep track of IDP practices and ensure future programs are evidence-based.

e) **Simplification of standard guidelines:** In addition to the national IDP policy, more documentation on proper procedures are required to inform field practice, for example, the Sphere minimum standards. These guidelines can be simplified and adapted for use at local levels for both field staff and IDP leaders, especially those in informal camps. This would ensure administrative approaches are more uniformed and overall camp management is improved.

f) **Education and capacity building**: Displacement and CHE training are required to improve the capacity of IDPs and all field staff. Building capacity of national and local authorities is essential for effective response to, and prevention of future crises. Selected health training can include case finding and disease diagnosis. Health education should be offered frequently to the IDPs to encourage good health practices and enhance intervention uptake. It could also be included in all intervention programs implemented to increase acceptability. Since one major criteria for IDP leadership selection was education, with extra training, these leaders could be better equipped and engaged in external camp management and administration processes. As a result,

this could help minimise the national authority's staff shortage challenges.

g) **Health system strengthening and improved health service practice:** Healthcare structures in disaster-affected regions are usually in chaotic and dilapidated conditions. Therefore, including an element of health system strengthening during the crisis phase would improve intervention stability. A few components that can be considered for inclusion are diagnosis and treatment of diseases, adoption of standard clinical guidelines, training of health staff, and improved referral process. In addition, health expenses need to be incorporated into budgetary planning to ease the burden on the IDPs. These factors can also be considered for inclusion when revising the health component of the national IDP policy.

h) **Active involvement of IDPs in policy, camp and health decision making**: Community involvement is highly considered as best practice in the majority of sectors. Thus, participation of IDPs in policy-making processes and intervention planning opens up opportunities for communication on health-related decisions. This can help clarify misunderstandings and build relationships between health providers and IDPs. Besides, IDP participation and engagement in governance and day-to-day life of the sites will develop self-ownership of the interventions and encourage better sustainability.

8.1.2 Further Work

Implications of the findings from this research suggest IDP health management is both sensitive and multifaceted. Considering the limited research on displaced population health management processes, more research would be essential.

Further academic research on camp health management, forced displacement and IDPs are required for other settings. This would improve the evidence base needed for better healthcare implementation science. More exploration should be considered on issues for vulnerable groups not always considered in humanitarian conditions, especially the physically challenged, elderly and healthcare services for men.

Similar studies, to this research, should include the perspectives of external NGOs as well as supporting secondary data. This would provide a more comprehensive review of existing situations. Also, conducting ethnographic studies of the IDPs' lived experiences would proffer richer perspectives into the IDP management dynamics.

Considering grey literature did not meet the criteria for the systematic review study, a separate review could be performed to assess related non-peer review and operational research documents to explore wider contexts related to the health interventions for IDPs in LMICs and related CHEs.

For Nigeria, it would also be interesting to explore the mental health of IDPs, perception of host communities and IDPs living in non-camp settings, as well as the management process for natural disaster-affected IDPs since most natural disasters occurred in the mid-belt and southern regions.

Finally, an economic assessment to review displacement expenditures in Nigeria could help provide clarity on IDP management financial implications and requirements. Such analysis would improve planning, especially for countries with low health budgets, like Nigeria.

8.2 Conclusion

Although the underlying causes of complex emergencies vary, the associated population displacement and health system destabilisation have predictable public health consequences. With the rise in global conflict and inevitable population displacement and migration, understanding the issues identified in this research, within the specific study context and other similar settings, is essential to developing efficient approaches for IDP management.

IDP management in Nigeria appeared complex and involved political, economic, social, cultural and security issues. It was also a burden on both the IDPs and the national authorities, hence the engagement of multiple parties. Despite this, support provided to the IDPs was still insufficient, inadequately coordinated and unevenly distributed; and the factors identified to influence these included camp status, location, economic and cultural issues. However, understanding the structure, composition, roles, and activities of the different stakeholders, as shown in the findings within this research, can help improve future actions.

Health outcomes of IDPs were influenced enormously by their poor living conditions. This showed curative health measures alone would not offset the harmful effects of poor environmental and health planning for communities in emergency settlements. Also, there was insufficient access to the services required to manage the reported health problems. Shared experiences of

handling these difficult situations, as shown in this research, provide valuable information for future development of health programmes and services for IDPs.

Considering displacement conditions are rarely ever the same, approaches used in health management for displaced populations, especially IDPs, would need to be dynamic and highly adaptable. Tackling the health problems of IDPs in Nigeria would require high political commitments at all government levels. Thus, setting up an effective health management system for any IDP crisis would require advanced system thinking which takes into consideration the core findings in this research. Doing so would contribute to the development of innovative interventions that can improve the healthcare management of IDPs and other displaced populations, as well as reduce the pressure on the national authorities.

Overall, as there is no consensus on when internal displacement ends, it is paramount that IDPs are still monitored, managed and provided for until they are adequately reintegrated back into the society. Implementation of adequately pre-planned healthcare interventions would significantly improve the health and wellbeing of IDPs.

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10 APPENDICES

10.1 Appendix A – Systematic review documents

10.1.1.1.1 Appendix 2.1 – Systematic review study protocol

Title: Appraisal of the essential healthcare services provided to conflict induced internally displaced populations in low and middle-income countries (LMICs): a systematic review

Authors: Winifred Ekezie, Stephen Timmons, Penny Siebert, Kelly Elimian, Rachael Murray

Review questions:

Primary Question:

- What essential healthcare services are provided to, and what outcomes are observed among internally Displaced Persons (IDPs) affected by armed conflict in low and middle-income countries (LMICs)?

Secondary Questions:

- What factors influence health-related interventions for IDPs in conflict settings?
- Who are the key players involved in IDP health management?
- What management approaches are used for IDP healthcare?

Searches: We will seek out any studies and evaluations that have either been published or not which have some outcome data.

Academic databases: Through OVID: CAB Articles, Embase, MEDLINE, PsyArticles, PsycINFO

Others Database: Scopus, Web of Science, LILAC

Grey Literature: OpenGrey, Research for health in humanitarian crisis: Refworld, WHO IRIS database, MSF database, ICRC database, IRIN, UNHCR, Forced Migration Review, Internal Displacement Monitoring Centre

Timeline: Only studies published in English, from 2000 to present. The year 2000 has been chosen as the start date as this was the year after the Inter-Agency Standing Committee adopted the IDP policy in 1999.

Search Strategy for Scopus Database: (ALL ((internally AND displace* OR displaced*) AND (conflict* OR complex AND emergency)) AND PUBYEAR > 1999) AND (health* OR

water* OR (nutri* OR food*) OR (vaccin* OR immuni*) OR treat* OR educat* OR prevent* OR (drug* OR medic*))

Types of study to be included: The study will include both published and unpublished studies which include (but not limited to) qualitative and quantitative studies, reviews, cross-sectional, cohort, and case-control studies, reports, working papers, datasheets and country profiles. All documents must report the outcome measured before and after the interventions.

Condition or domain being studied: The health outcomes from the interventions and populations meeting the inclusion criteria will be reported.

Studies or articles, like press releases, that do not clearly report on the intervention or on proximate outcomes such as uptake proportions will be excluded.

Participants/population:

Inclusion: Armed Conflict affected IDPs in low and middle-income countries (based upon World Bank country classification)

Exclusion: Non-conflict IDPs, refugees and asylum seekers

Intervention(s), exposure(s): This review will cover the core primary healthcare components as stated in the WHO alma-ata. Hence primary health care in this context includes **8 elements: Education; Water and Sanitation; Nutrition; Maternal and Child Health; Immunisation; Prevention of endemic disease; Treatment; and Essential Drug availability**.

These elements will be reviewed in relation to health outcomes for the population. Studies focused on clinical, medical and community-based interventions will be included. While studies on social protection factors like cash transfers and prevention or mitigation of GBV risk will be excluded.

Comparator(s)/control: There is no fixed comparator/control. But comparator/control group within the included studies may be present.

Main outcome(s): Activities and outputs of the health interventions.

Additional outcome(s):

- Factors affecting intervention implementation
- Intervention Management Approach (Involved parties and strategies implemented

Data extraction (selection and coding): Studies will be screened and selected in three stages process and the PRISMA chart will be used to document the process

Review of titles and available abstracts from databases

Full paper screening by WE

Screening of included and excluded full papers by RM

Considering the large volume of potential documents all peer reviewed papers will be fully screened using the 3-stages. But for the other documents, a single-person would review all the papers, and 5-10% will be reviewed by other authors.

Data to be extracted: Study characteristics, country(s) of intervention, socio-demographic characteristics of participants, study setting/location, inclusion or exclusion criteria, study design, sample sizes, intervention type and description, intervention target population and duration, uptake and retention rates, outcome data, main findings/results, intervention limitations, and key conclusions.

Risk of bias (quality) assessment: Quality of the included studies will be assessed using the **Critical Appraisal Skills Programme (CASP) checklists.** Assessment for unpublished documents will be assessed using a customized checklist.

Two reviewers will assess the risk of bias in each study in duplicate and independently. They will resolve disagreements by discussion or with the help of a third reviewer. Scores will be calibrated forming a proportional score for each paper.

If there is sufficient homogeneity between studies a meta-analysis will be conducted by high and low quality papers.

Strategy for data synthesis: Data will be synthesized using summary tables and descriptive narrative considering heterogeneity of contexts. Where feasible, categorization will be done by intervention types, location and outcomes.

Analysis of subgroups or subsets: If there are sufficient data, findings will be discussed by crisis duration, geographic region, population, settlement setting, intervention type, uptake and outcomes

Subject index terms status: Subject indexing assigned by CRD (CRD42018086229)

Subject index terms: Humans; Basic needs; Primary healthcare, Health Services Intervention; Internally Displaced Persons; Armed Conflict; Displacement

10.1.1.1.2 Appendix 2.2 – Systematic review sample search strategy from EMBASE

# ▲	Searches	Results	Type	Actions	Annotations
1	(internally displaced* or displaced*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word]	33187	Advanced	Display Results | More	
2	limit 1 to (human and yr="2000 -Current")	14405	Advanced	Display Results | More	
3	(conflict* or complex emergency*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word]	146445	Advanced	Display Results | More	
4	1 and 2 and 3	450	Advanced	Display Results | More	
5	health*.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word]	4327065	Advanced	Display Results | More	
6	(water* or sanitation*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word]	991973	Advanced	Display Results | More	
7	(nutrit* or food*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word]	1059426	Advanced	Display Results | More	
8	(vaccin* or immuni*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word]	778935	Advanced	Display Results | More	
9	prevent*.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word]	2420994	Advanced	Display Results | More	
10	educat*.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word]	1152159	Advanced	Display Results | More	
11	treat*.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word]	6926517	Advanced	Display Results | More	
12	(drug* or medic*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word]	12607101	Advanced	Display Results | More	
13	4 and 5	313	Advanced	Display Results | More	
14	4 and 6	24	Advanced	Display Results | More	
15	4 and 7	61	Advanced	Display Results | More	
16	4 and 8	30	Advanced	Display Results | More	
17	4 and 9	94	Advanced	Display Results | More	
18	4 and 10	59	Advanced	Display Results | More	
19	4 and 11	113	Advanced	Display Results | More	
20	4 and 12	144	Advanced	Display Results | More	
21	13 or 14 or 15 or 16 or 17 or 18 or 19 or 20	392	Advanced	Display Results | More	

Contract

10.1.1.1.3 Appendix 2.3 – Systematic review quality assessment checklist

Study No		Author Details	
Study Title			
Study Design		Is there a clear study result?	
Is there a clear research focus?		Are ethical issues and limitations reported?	
Is an appropriate methodology used?		Are result applicable and replicable?	
Is appropriate recruitment done (with stats)?		Does it fit with other related evidence?	
Is there a comparison group?		What are the study Implications and/or Recommendations?	
Is bias minimized with clear inclusion and exclusion criteria?		Quality Summary Note	
Are confounders accounted?		Quality Score	
List of accounted confounders		Quality Grade	
Are comparison groups similar?			
Is follow up completion rate reported?			
Are loss to follow up reasons reported?			

10.2 Appendix B – Ethical approvals

10.2.1.1.1 Appendix 3.1 – Nigerian National Health Research Council

National Health Research Ethics Committee of Nigeria (NHREC)

Promoting Highest Ethical and Scientific Standards for Health Research in Nigeria

Federal Ministry of Health

NHREC Protocol Number NHREC/01/01/2007- 19/04/2016
NHREC Approval Number NHREC/01/01/2007-08/06/2016
Date: 12 June 2016

RE: AN INVESTIGATION OF VACCINATION UPTAKE AND SERVICES IN INTERNALLY DISPLACED POPULATIONS (IDPS) IN NIGERIA

Health Research Ethics Committee (HREC) assigned number: NHREC/01/01/2007

Name of Student Supervisor: Dr Catherine Pritchard

Name of Student Investigator: Winifred Ekezie

Address of Student Investigator: PhD Student
University of Nottingham, UK
w.ekezie@yahoo.com

Date of receipt of valid application: 19/04/2016
Date when final determination of research was made: 08/06/2016

Notice of Expedited Committee Review and Approval

This is to inform you that the research described in the submitted protocol, the consent forms and other participant information materials have been reviewed and given expedited committee approval by the National Health Research Ethics Committee.

This approval dates from 08/06/2016 to 07/06/2017. If there is delay in starting the research, please inform the HREC so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of these dates. *All informed consent forms used in this study must carry the HREC assigned number and duration of HREC approval of the study.* **If this is a multi-year research, endeavour to submit your annual report to the HREC early in order to obtain renewal of your approval and avoid disruption of your research.**

The National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the Code including ensuring that all adverse events are reported promptly to the HREC. No changes are permitted in the research without prior approval by the HREC except in circumstances outlined in the Code. The HREC reserves the right to conduct compliance visit your research site without previous notification.

Signed



Clement Adebamowo BMChB Hons (Jos), FWACS, FACS, DSc (Harvard)
Chairman, National Health Research Ethics Committee of Nigeria (NHREC)

Department of Health Planning, Research & Statistics
Federal Ministry of Health
11th Floor, Federal Secretariat Complex Phase III
Ahmadu Bello Way Abuja

Tel: +234-09-523-8367
E-mail: chairman@nhrec.net secretary@nhrec.net, deskofficer@nhrec.net.
URL: http://www.nhrec.net.

10.2.1.1.2 Appendix 3.2 – University of Nottingham Medical School ethics approval

Direct line/e-mail
+44 (0) 115 8232561
Louise.Sabir@nottingham.ac.uk

12th July 2016

Faculty of Medicine and Health Sciences (FMHS)

Research Ethics Committee
School of Medicine Education Centre
B Floor, Medical School
Queen's Medical Centre Campus
Nottingham University Hospitals
Nottingham
NG7 2UH

Ms Winifred Ekezie
PhD Student,
c/o Dr Catherine Prichard
Associate Professor
Epidemiology and Public Health
School of Medicine
Clinical Sciences Building
City Hospital Campus
Nottingham University Hospitals
Hucknall Road
NG5 1PB

Dear Ms Ekezie

FMHS Research Ethics Reference No: OVSb12072016 / **NHREC Approval No:** 01/01/2007-08/06/2016 - **please always quote**	
Study Title: An investigation of vaccination uptake and services in internally displaced populations (IDPs) in Nigeria.	
Chief Investigator/Supervisor: Dr Catherine Prichard, Associate Professor, Epidemiology and Public Health, Dr Puja Myles, Associate Professor, Heath Protection and Epidemiology, School of Medicine.	
Lead Investigators/student: Winifred Ekezie, PhD Student, Epidemiology and Public Health, School of Medicine.	
Type of Study: Qualitative/quantitative, surveys and interviews	
Proposed Start Date: 01/07/2016	**Proposed End Date:** 31/10/2017 4 months
No of Subjects: circa 2,250	**Age:** 18+ years

Thank you for submitting the above application which was considered by the Committee on 12th July 2016 and the following documents were received:

- FMHS Research Ethics Application form dated 20/06/2016
- National Health Research Ethics Committee of Nigeria (NHREC) Notice of Expedited Committee Review and Approval dated 08/06/2016
- Project Proposal
- Appendix 1a – Participant Information sheet (IDPs) V1 27/05/2016
- Appendix 1b – Participant Information Sheet (Health Provider) V1 27/05/2016
- Appendix 1c – Participant Information Sheet (Camp Manager) V1 27/05/2016
- Appendix 1d – Participant Information Sheet (Policy Makers) V1 27/05/2016
- Component 1 – Individual IDP Questionnaire V1 17/04/2016
- Component 2 – IDP Focus Group Discussion Tool V1 17/04/2016
- Component 3 – Camp Health Services Tool V1, 17/04/2016
- Component 4 – Camp Check List V1, 17/04/2016
- Component 5 - Camp Manager Questionnaire V1, 17/04/2016
- Component 6 – IDP Policy Makers Questionnaire V1 17/04/2016

These have been reviewed and are satisfactory and the study is approved.

10.2.1.1.3 Appendix 3.3 – National Emergency Management Agency camp visit permits

10.2.1.1.4 Appendix 3.3a – North-East camp visit permit

THE PRESIDENCY

NATIONAL EMERGENCY MANAGEMENT AGENCY

No. 8 Adetokunbo Ademola Crescent, Maitama, P.M.B. 357 - Garki Abuja - Nigeria.

NEMA/PRE/III/II

14th September, 2016

North East Zonal coordinator

Medical Stores Premises

Off Auno Street, Baga Road Maiduguri,

Borno state.

RE: REQUEST FOR PERMISSION TO CONDUCT RISEARCH AT THE IDP CAMPS IN NIGERIA.

Above subject matter refers please.

2. I am directed to inform you that the named applicant, Winifred Ekezie a PhD student at the University of Nottingham United Kingdom, has been given approval to conduct her research at the IDPs camps in Nigeria.

3. However, I am directed to further inform you that all her activities at the camps should be supervised by you.

4. This is for your information please.

Kayode Fagbemi

Deputy Director, Planning Research and Forecasting

For: Director General

CC:

Winifred Ekezie

Website: www.nema.gov.ng, E-mail: info@nema.gov.ng

10.2.1.1.5 Appendix 3.3b – North-West camp visit permit

THE PRESIDENCY

NATIONAL EMERGENCY MANAGEMENT AGENCY

No. 8 Adetokunbo Ademola Crescent, Maitama, P.M.B. 357 - Garki Abuja - Nigeria.

NEMA/PRF/1101

14th September, 2016

North West Zonal coordinator

No 13 Wurno Road

Unguwan Sarki,

Kaduna state.

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT THE IDP CAMPS IN NIGERIA

Above subject matter refers please.

2 I am directed to inform you that the named applicant, Winifred Ekezie a PhD student at the University of Nottingham, United Kingdom, has been given approval to conduct her research at the IDPs camps in Nigeria.

3. However, I am directed to further inform you that all her activities at the camps should be supervised by you.

4. This is for your information please.

Kayode Fagbemi

Deputy Director, Planning Research and Forecasting

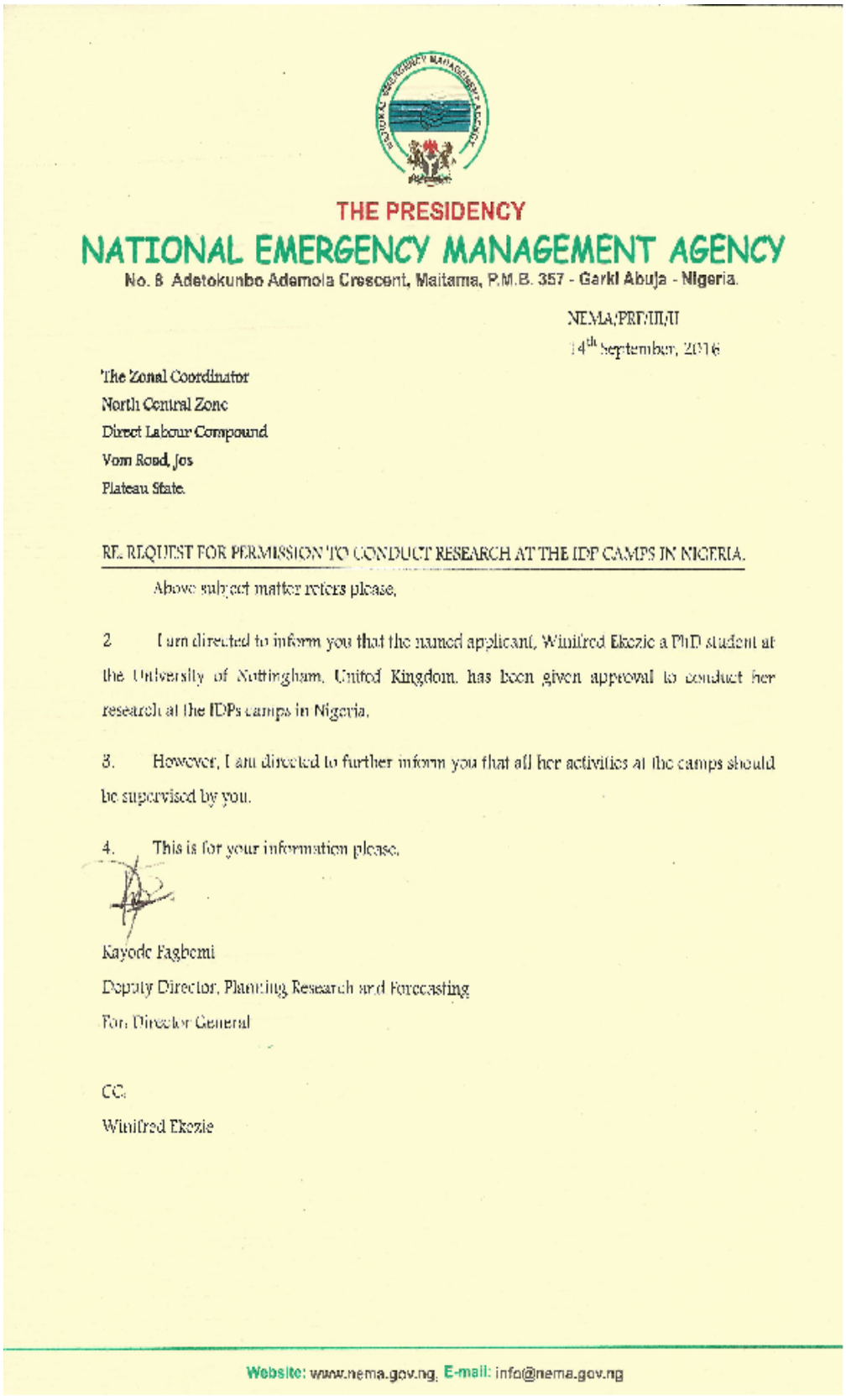
For: Director General

CC

Winifred Ekezie

Website: www.nema.gov.ng, E-mail: info@nema.gov.ng

10.2.1.1.6 Appendix 3.3c – North-Central camp visit permit



THE PRESIDENCY

NATIONAL EMERGENCY MANAGEMENT AGENCY

No. 8 Adetokunbo Ademola Crescent, Maitama, P.M.B. 357 - Garki Abuja - Nigeria.

NEMA/PRP/III/II

14th September, 2016

The Zonal Coordinator
North Central Zone
Direct Labour Compound
Vom Road, Jos
Plateau State.

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT THE IDP CAMPS IN NIGERIA.

Above subject matter refers please,

2 I am directed to inform you that the named applicant, Winifred Ekezie a PhD student at the University of Nottingham, United Kingdom, has been given approval to conduct her research at the IDPs camps in Nigeria.

3. However, I am directed to further inform you that all her activities at the camps should be supervised by you.

4. This is for your information please.

Kayode Fagbemi
Deputy Director, Planning Research and Forecasting
For: Director General

CC:
Winifred Ekezie

Website: www.nema.gov.ng, E-mail: info@nema.gov.ng

10.2.1.1.7 Appendix 3.3d – FCT camp visit permit

THE PRESIDENCY

NATIONAL EMERGENCY MANAGEMENT AGENCY

No. 8 Adetokunbo Ademola Crescent, Maitama, P.M.B. 357 - Garki Abuja - Nigeria.

NEMA/PREP/II/10

14th September, 2016

Head Abuja Operation Office
Plot 111b Gidado Street
Behind peace haven Hotel,
Wuye, FCT.

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT THE IDP CAMPS IN NIGERIA.

Above subject matter refers please.

2 I am directed to inform you that the named applicant, Winifred Ekezie a PhD student at the University of Nottingham, United Kingdom, has been given approval to conduct her research at the IDPs camps in Nigeria.

3. However, I am directed to further inform you that all her activities at the camps should be supervised by you.

4. This is for your information please.

Kayode Fagbemi
Deputy Director, Planning, Research and Forecasting,
For: Director General

CC:
Winifred Ekezie

Website: www.nema.gov.ng, E-mail: info@nema.gov.ng

10.3 Appendix C – Participant information and Consent forms

10.3.1.1.1 Appendix 3.4 – IDP information and consent form

Introduction

You have been invited to participate in a PhD research aimed at assessing the number of displaced people who received immunisation on these camp, check the factors that cause illness on the camps, identify what IDPs think about immunisation and if they participate in managing IDP activities. This information will be used to help improve the overall management of IDP healthcare.

What you have been asked to do

You have been asked to participate in a confidential and anonymous face-to-face interview session, lasting 30 - 60 minutes. This interview will be conducted on the camp premises. You will be asked questions about your camp living conditions, household information, health and previous immunisation. You will also be asked to present evidence based on your responses in some cases for further clarity and information.

Your data

To ensure accuracy of the data collected for qualitative analysis, the interview session will be recorded with your consent. Notes and recordings will be anonymised and stored within an encrypted folder, accessible only to the lead researcher, Winifred Ekezie. Your responses will not be discussed with other participants in the study and your identity will not be discussed either. Your participation in this study is completely voluntary. You may choose not to answer any of the questions asked or withdraw at any time during or after the interview session, up until any potential publication of the findings.

If you agree to take part, your name will not be recorded on the questionnaires and the information given will not be disclosed to other parties. Your responses to the questions will be used for the purpose of this project only and I will not have access to any of your medical records. You can be assured that if you take part in this project you will remain anonymous.

You may contact the Researcher, Winifred Ekezie (PhD Student) of Preston Healthcare Consulting Ltd, Abuja on +2348134829226 or w.ekezie@yahoo.com should you have any questions following this interview.

Please sign below once the interviewer has explained fully the aims and procedures of the study to you. Confirm you have been given full explanation of the research, you have understood the information, and have been given an opportunity to ask questions.

10.3.1.1.2 Appendix 3.5 – Camp manager information and consent form

Introduction

You have been invited to participate in a PhD research aimed at assessing the number of displaced people who received immunisation on these camp, check the factors that cause illness on the camps, identify what IDPs think about immunisation, their participate in managing IDP activities, and also the healthcare and camp services available to them. This information will be used to help improve the overall management of IDP healthcare.

What you have been asked to do

You have been asked to participate in a confidential and anonymous face-to-face interview session, lasting 30 - 60 minutes. This interview will be conducted on the camp premises or your office. You will be asked questions about your current role and experience in the IDP camp service management. You will also be asked to present evidence and show the interviewer around the camp based on your responses in some cases for further clarity and information.

Your data

To ensure accuracy of the data collected for qualitative analysis, the interview session will be recorded with your consent. Notes and recordings will be anonymised and stored within an encrypted folder, accessible only to the lead researcher, Winifred Ekezie. Your responses will not be discussed with other participants in the study and your identity will not be discussed either. Please keep in mind that while responses will be kept confidential, if you contribute something that only you or your organisation could comment on, that may then be recognizable.

Your participation in this study is completely voluntary. You may choose not to answer any of the questions asked of you. You may withdraw at any time during or after the interview session up until any potential publication of the findings.

If you agree to take part, your name will not be recorded on the questionnaires and the information will not be disclosed to other parties. Your responses to the questions will be used for the purpose of this project. If you do not wish to take part you do not have to give a reason and you will not be contacted again. Similarly, if you do agree to participate you are still free to withdraw at any time.

You may contact the Researcher, Winifred Ekezie (PhD Student) of Preston Healthcare Consulting Ltd, Abuja on +2348134829226 or w.ekezie@yahoo.com should you have any questions following this interview.

Please sign below once the interviewer has explained fully the aims and procedures of the study to you.

Confirm you have been given full explanation of the research, you have understood the information, and have been given an opportunity to ask questions.

10.3.1.1.3 Appendix 3.6 – Health Service Provider (HSP) Information and Consent Form

Introduction

You have been invited to participate in a PhD research aimed at assessing the number of displaced people who received immunisation on these camp, check the factors that cause illness on the camps, identify what IDPs think about immunisation, their participation in the management of IDP activities in the camp, and the healthcare and camp services available to them. This information will be used to help improve the overall management of IDP healthcare.

What you have been asked to do

You have been asked to participate in a confidential and anonymous face-to-face interview session, lasting 30 - 60 minutes. This interview will be conducted on the camp premises or your office. You will be asked questions about your current role and experience in the IDP healthcare service management. You will also be asked to present evidence based on your responses in some cases for further clarity and information.

Your data

To ensure accuracy of the data collected for qualitative analysis, the interview session will be recorded with your consent. Notes and recordings will be anonymised and stored within an encrypted folder, accessible only to the lead researcher, Winifred Ekezie. Your responses will not be discussed with other participants in the study and your identity will not be discussed either.

Please keep in mind that while responses will be kept confidential, if you contribute something that only you or your organisation could comment on, that may then be recognizable. Your participation in this study is completely voluntary. You may choose not to answer any of the questions asked of you. You may withdraw at any time during or after the interview session up until any potential publication of the findings.

If you agree to take part, your name will not be recorded on the questionnaires and the information will not be disclosed to other parties. Your responses to the questions will be used for the purpose of this project only. If you do not wish to take part you do not have to give a reason and you will not be contacted again. Similarly, if you do agree to participate you are still free to withdraw at any time.

You may contact the Researcher, Winifred Ekezie (PhD Student) of Preston Healthcare Consulting Ltd, Abuja on +2348134829226 or w.ekezie@yahoo.com should you have any questions following this interview.

Please sign below once the interviewer has explained fully the aims and procedures of the study to you. Confirm you have been given full explanation of the research, you have understood the information, and have been given an opportunity to ask questions.

10.3.1.1.4 Appendix 3.7 - Administrative policy maker information and consent form

Introduction

You have been invited to participate in a PhD research aimed at assessing the number of displaced people who received immunisation on these camp, check the factors that cause illness on the camps, identify what IDPs think about immunisation, if they participate in managing IDP activities, the healthcare and camp services available to them, and the guiding policies that inform IDP management. This information will be used to help improve the overall management of IDP healthcare.

What you have been asked to do

You have been asked to participate in a confidential and anonymous face-to-face interview session, lasting 30 - 90 minutes. This interview will be conducted in your office premises. You will be asked questions about your current role and experience in the IDP camp service management. You will also be asked to present evidence based on your responses for further clarity and information.

Your data

To ensure accuracy of the data collected for qualitative analysis, the interview session will be recorded with your consent. Notes and recordings will be anonymised and stored within an encrypted folder, accessible only to the lead researcher, Winifred Ekezie. Your responses will not be discussed with other participants in the study and your identity will not be discussed either. Please keep in mind that while responses will be kept confidential, if you contribute something that only you or your organisation could comment on, that may then be recognizable.

Your participation in this study is completely voluntary. You may choose not to answer any of the questions asked of you. You may withdraw at any time during or after the interview session up until any potential publication of the findings. If you agree to take part, your name will not be recorded on the questionnaires and the information will not be disclosed to other parties. Your responses to the questions will be used for the purpose of this project only

If you do not wish to take part you do not have to give a reason and you will not be contacted again. Similarly, if you do agree to participate you are still free to withdraw at any time. You may contact the Researcher, Winifred Ekezie (PhD Student) of Preston Healthcare Consulting Ltd, Abuja on +2348134829226 or w.ekezie@yahoo.com should you have any questions following this interview.

Please sign below once the interviewer has explained fully the aims and procedures of the study to you. Confirm you have been given full explanation of the research, you have understood the information, and have been given an opportunity to ask questions.

10.4 Appendix D – Data collection instruments

10.4.1.1.1 Appendix 4.1 – Audit data collection instrument

State: **Camp Name:**

Interviewer Name:

Date: **Time:**

Job Title of Respondent:

Camp Details

1. Date of camp establishment (arrival of first IDPs) – DD/MM/YYYY
2. Camp Location – (Rural, Urban)
3. Camp type – (Dispersed settlements, Mass shelter in collective centres, Reception and transit camps, Self-settled camps, Planned camps, Other- Specify)
4. Shelter
    a. Type of Shelters - (Mud, Thatch, Cardboard, School Building, Tent, Outdoor)
    b. Number of Shelter
5. Water Source
    a. Type of water - (None, Borehole, Street vendor, Rain, Well, Rain, Water tank, Public Stand Post, River)
    b. Number outlets – (1,2,3,4, 5 and above)
    c. Distance to water source
6. Sanitation
    a. Type of toilet - (Pit, Outdoor/bush, Mobile toilet, Water closet)
    b. Presence of drainage for waste water – (Yes, No, Don't know)
    c. Method of solid waste management – (Burning, Burying, Indiscriminate litter)

7. Has a needs assessment been carried out on this camp? - (Yes, No, Don't know)

Population demographics

8. Number of households on camp –
9. Average size of households –
10. Number of men –
11. Number of women –
12. Number of children –
13. Ethnic composition
    a. Religion – (Muslims, Christians, Others-specify)
    b. Tribe – (Hausa, Fulani, Others-specify)

Camp Resources

14. Are there healthcare staff resident on the camp? – (Yes, No, Don't know)
    a. If yes, how many: Doctors___, Nurses___, CHWs____
15. Are there visiting health staff? – (Yes, No, Don't know)
    a. If yes, which cadre? – (Doctors, Nurses, CHWs, Volunteers)
    b. How many: Doctors___, Nurses___, CHWs ____ , Volunteers ___
    c. How often do they visit? – (Daily, Bi weekly, Weekly, Fortnightly, Monthly, Quarterly)
16. Is there a Health service post on camp? – (Yes, No, Don't know)
    a. If no, in cases of emergency is there a designated health centre where IDPs are treated? – (Yes, No, Don't know)
    b. If yes, where?
    c. How far away is it?

17. Are there basic health commodities present on camp? – (Yes, No, Don't know)
    a. If yes, List
18. Is there a distribution system on the camp for the following:
    - Food – (Yes, No, Don't know)
    - Non-Food Items – (Yes, No, Don't know)
    - Medical aid – (Yes, No, Don't know)
        a. What is the basis for these distribution systems? – (Age, Gender, Malnourishment level, Disease, Don't know)

Intervention Programmes

Are the following interventions done on this camp:

19. Poverty eradication interventions – (Yes, No, Don't know)
20. Water, Sanitation and Hygiene (WASH) intervention – (Yes, No, Don't know)
21. Protection intervention – (Yes, No, Don't know)
22. Medical Aid Interventions – (Yes, No, Don't know)
23. Health Education – (Yes, No, Don't know)
24. Immunisation – (Yes, No, Don't know)

10.4.1.1.3 Appendix 5.1 – IDP Survey questionnaire

State: **Camp Name:**

Interviewer Name:

Date: **Time:**

Household ID: (Interviewer initials/household number) e.g. TK/01

Section A: Basic Bio-data

1. Gender - (Male, Female)
2. How old are you? – (0 – 90 years old)
3. What is your marital status? – (Single, Married, Divorced, Widowed)
4. How many people are in your family **on this camp**? – (1 – 10)
    a. Number of adults
    b. Number of children under 18
    c. Number of children under 5
5. Have there been any deaths in your household **on this camp**? – (Yes, No, Don't Know)
    a. If yes, how many adults?
    b. How many Children?
    c. What were the causes of deaths? – (Sickness, Injury, Accident, Others- Specify)
6. How long have you been living **on this camp**?
7. What state did you reside in before displacement?
8. What is your tribe/ethnicity? - (Hausa, Fulani, Others-specify)
9. What languages do you speak? – (Hausa, Fulani, Others-specify)
10. What is your religion? – (Christianity, Islam, Others-specify)
11. What is your highest educational level – (None, Primary, Secondary, Diploma, Undergraduate, Post graduate)

12. Do you currently work **(have a job)**? – (Yes, No, Don't know)
    a. If yes, what do you do?
13. Are you physically disabled? – (Yes, No, Don't know)
    a. If yes, **when** were you disabled - (Before or After displacement)
    b. If **after**, what was the cause of the disability? – (From birth, Accident, Sickness)
14. Have you stayed at any IDP location before coming to **this camp**? – (Yes, No, Don't know)
    a. If yes, what state?

Section B: Living Condition in Camp

15. Accommodation type where you live **on this camp** – (Mud, Thatch, Cardboard, School Building, Tent, Outdoor)
16. How many people live in this accommodation? (This includes non-family members sharing the accommodation)
17. What is your main source of drinking water? - (None, Borehole, Street vendor, Rain, Well, Rain, Water tank, Public Stand Post, River)
18. How do you store water? - (Jerry can, Traditional pot, Drums, Buckets, Other)
    a. Is this water covered? - (Yes, No, Don't know)
    b. Is the water container clean? - (Yes, No, Don't know)
19. How frequently do you eat food? - (Number of meals per day or week)
    a. Where do you get food to eat?
    b. Do you wash your hand before eating? - (Yes, No, Sometimes)
20. What type of toilet do you use? – (Pit, Outdoor/bush, Mobile toilet, Water closet)

a. How far is the toilet from where you sleep/eat? – (Very close, Not too far, Very far)
b. Do you wash your hand after using the toilet? - (Yes, No, Sometimes)

21. Do you have your bath daily? - (Yes, No)
    a. If yes, do you use soap?
22. Where do you dispose rubbish? – (Burn it, Bury it, communal rubbish tip, throw on ground)
    a. Are there problems with rodents? - (Yes, No, Don't know)
    b. If yes, which – (Rats, Flies, Mosquitoes, Others-specify)

Section C: Health History

23. Have you fallen sick since you came to **this camp**?
    a. If yes, what kind of sickness? - (Running stomach, Watery stool, Malaria, Fever, Measles, Coughing, Others-specify)
    b. Did you seek medical help for your illness? (Yes, No)
    c. Did you take any medicine for your illness? (Yes, No)
24. Do you have any long term illness?
    a. If yes, what illness? (Asthma, High blood pressure, Diabetes, HIV etc.)
    b. Have you been seen by a doctor for this illness since you have been **on the camp**? (Yes, No)

Female Respondents:

25. Have you delivered any children since you arrived at **this camp**? – (Yes, No)
    a. If yes, how many?
    b. Did you get a tetanus vaccine when you were pregnant? – (Yes, No, Don't Know)

c. Where did you deliver your baby? – (Camp, Health centre, Hospital)

d. Has your baby been vaccinated? – (Yes, No, Don't know)

26. Are you currently pregnant? (Yes, No, Don't Know)

    a. If yes, how many months pregnant?

    b. Have you received any vaccines since you became pregnant? (Yes, No, Don't Know)

    c. If yes, which vaccines?

Section D: Vaccination Information

27. Have you ever been vaccinated? – (Yes, No, Don't know)

    a. If yes, which vaccines ***(see vaccine list)***?

    b. When were you given these vaccinations?

28. Have you received any vaccination **on this camp**? – (Yes, No, Don't know)

    a. If yes, which vaccines ***(see vaccine list)***?

    b. When were you given these vaccinations?

    c. Do you have a vaccination card? – (Yes, No, Don't know)

Mothers with infants only

(For women who gave birth on this camp only)

29. Did you vaccinate your baby at birth? – (Yes, No, Don't know)

30. Did you vaccinate your baby at 6 weeks? – (Yes, No, Don't know)

31. Did you vaccinate your baby at 10 weeks? – (Yes, No, Don't know)

32. Did you vaccinate your baby at 14 weeks? – (Yes, No, Don't know)

33. Did you vaccinate your baby at 9 – 12 months? – (Yes, No, Don't know)

Immunisation Perception

34. What do you think about immunisation?
35. Have your thoughts on immunisation changed over the years? (Yes, No)
    a. If they say yes, can you tell me what brought about this change in your views?
36. Do you participate in the camp community management? – (Yes, No)
    a. If yes, how?
37. Do you participate in camp vaccination campaign planning? – (Yes, No)

10.4.1.1.4 Appendix 6.1 – IDP Focus Group Discussion (FGD) guide

State: **Camp Name:**

Interviewer Name:

Date: **Time:**

No of Participants:

Community Structure

1. Are there management committees run by IDPs on the camp? – (Yes, No, Don't Know)
2. How many IDP committees are there in this camp?
    a. If more than one: What is the difference between these committees?
    b. How many members make up one committee?
    c. How many female members are there in those committees?
    d. Are any government officials involved in the IDP committees?
    e. How are committee members selected?
3. What are the current roles and functions of the IDP committee?
4. Do you feel you represent the views and needs of the entire IDPs on the camp? How?
5. How often do the committees meet? Why?

Community Interaction

6. When planning, do you identify and target the most vulnerable groups/individuals?
    a. If yes, who are the most vulnerable?
    b. Why do you consider them most vulnerable?
7. Are women involved in community decision making? How?
8. How do you manage the following on the camp for the entire IDP population?
    a. Water

b. Food

c. Toilets

d. Waste disposal

e. Other supplies (Specify)

Community Participation

9. Do you feel you are adequately informed about activities in the camp?
    a. If yes, how do you get information?
    b. Do you share this information with the other IDP population? If yes, how?
10. Do you receive information about assistance program?
    a. Are you given opportunities to assist donor agencies on projects?
11. Are you involved in the design and implementation of assistance programs for IDPs? If yes, how? Give an example.

Community Communication

12. When people in the camp have complaints on issues within the camp, who do they speak to?
13. How do you convey the needs of the IDP population to the camp management?
14. If you want to know more information about activities going on in the camp what do you do? Who do you ask?
15. How would you improve the way the camp is managed?
16. How would you improve the way the IDP committee operates in terms of giving support/ assistance?
17. What is the best way for you to find out information about camp activities/programmes? (Probe: community announcer, drama, posters, radio, etc.)

Community Health

18. What are the most common diseases on this camp?
    a. Who gets these diseases? Men, Women, Young children older children?
19. What do you do when someone has: Malaria, Fever, Running stomach and Excess coughing
    a. Who do you go to? When?
    b. Do you give any home treatments? Who do you get them from?
20. At what time do mosquitoes bite most?
    a. Do people use bed nets here? Why?
    b. Where and how do people sleep?
    c. Do Men and women use the same toilets? Why? (Probe: Gender, Culture, Religion) If no, where and when do they go to toilet?
21. Have there been any immunisation campaigns/outreaches on this camp? If yes, when?
    a. Which vaccines where given?
    b. Was the IDP community involved in the planning of the campaign? If yes, how were you involved?
    c. How were the campaigns carried out?
    d. Did the vaccination reach everyone on the camp? If no, who were missed out? Why were they missed out?
    e. How do you think administering vaccines can be improved in IDP camps?
22. Do you think immunisation is effective? Why do you think so?
23. Have there been any deaths on this camp? What were the causes of deaths?

10.4.1.1.5 Appendix 6.2 – Camp Manager (CM) interview guide

State: **Camp Name:**

Interviewer Name:

Date: **Time:**

Camp Assessment

1. Has a situation assessment been conducted for this camp?
    a. If yes, when? (Probe: Before, After, During the population influx, Unknown)
    b. If yes, were the following considered:
        i. Background information on the state – (Yes, No, Don't know)
        ii. Local community leaders and refugee community leaders – (Yes, No, Don't know)
        iii. Area or its immediate surroundings – (Yes, No, Don't know)
    c. If no, why? How was the site selected?
2. Has a communicable disease risk assessment been conducted for this camp? – (Yes, No, Don't know)
    a. If yes, when? (request evidence)
    b. Who conducted the assessment?
    c. Did the assessment include:
        i. Event description – (Yes, No, Don't know)
        ii. Threat/vulnerability assessment– (Yes, No, Don't know)
        iii. Risk characterization – (Yes, No, Don't know)

Camp Amenities

3. Has the camp water supply been tested and checked if safe for drinking? – (Yes, No, Don't know)
    a. If yes, when?
    b. And by who?
4. Is the water supply protected from faecal contamination? – (Yes, No, Don't know)
    a. If yes, how?
5. How is water stored on the camp?
6. Are soaps provided for handwashing in all households? – (Yes, No, Don't know)
7. Are there handwashing facilities on the camp? – (Yes, No, Don't know)
8. Where are waste disposed?
    a. How far is this from the households?
9. Are there stagnant waters around the camp? – (Yes, No, Don't know)
10. Are animals reared on this camp? – (Yes, No, Don't know)
    a. If yes, how are they managed? - (Vaccinated, Disease monitoring, Stray animals, Don't know)
11. Do households use insecticide treated nets? – (Yes, No, Don't know)
    a. If yes, what how many?
12. Are there any educational facilities/activities on the camp? – (Yes, No, Don't know)
    a. If yes, please outline and explain briefly

Intervention Programme

13. Are the following programs being implemented on this camp?
    a. Environmental Intervention – (Yes, No, Don't know)

b. Poverty eradication interventions – (Yes, No, Don't know)
c. Water, Sanitation and Hygiene (WASH) intervention – (Yes, No, Don't know)
d. Protection intervention – (Yes, No, Don't know)
e. Health Education – (Yes, No, Don't know)
f. Vaccination intervention – (Yes, No, Don't know)
g. Reproductive Health Interventions – (Yes, No, Don't know)
h. Mental Health and Psychosocial Support – (Yes, No, Don't know)

14. Is there a distribution system on the camp? – (Yes, No, Don't know)
    a. If yes, explain.
    b. Does this system apply to medical aid?
    c. Is the distribution plan the same for vaccination?
15. How do you determine what resources are needed by the IDPs?

Vaccination Initiatives

16. Have there been immunisation campaigns/outreaches on this camp since it was set up? – (Yes, No, Don't know)
    a. If yes, how many?
    b. What types of vaccines were administered during the campaign administered?
    c. When were they done?
    d. How many people were immunised during each campaign?
17. Are there priority setting for administering vaccination? – (Yes, No, Don't know)
    a. If yes, outline the priority order? (Probe: Age, Gender, Disability, Illness)

b. If no, how do you administer vaccination to the entire IDP population?

18. Have there been any disease outbreaks on the camp? – (Yes, No, Don't know)
    a. If yes – When?
    b. What type of diseases?
    c. What were the number of No of infected people?
    d. How many deaths occurred?
19. Is there a fixed health post on the camp? – (Yes, No, Don't know)
    a. Do they offer vaccination services?
    b. What other service are offered there?
20. Do you refer IDPs for health services?– (Yes, No, Don't know)
    a. To where? – (Health post, Primary Health Centre, Hospital, Laboratory, Pharmacy)
    b. What is the distance from camp location?
21. Is there an epidemic contingency plan for this camp?
    a. Have there been any trainings for active/passive case finding?
    b. Is there an appropriate reporting mechanism?
    c. Are there standard protocols for prevention, diagnosis and treatment during an outbreak?

Camp Officials

22. How often do you visit the camp? Why?
23. Do have standard guidelines and procedures for managing the camp? – (Yes, No, Don't know)
    a. If yes, can you provide a copy of these guidelines for this study? (request evidence)

i. Who developed these guidelines?
ii. Does the guideline include health management? – (Yes, No, Don't know)
iii. Are the guidelines consistently followed? – (Yes, No, Don't know)

b. If no, what determines your management approach?

24. What decisions are within your remit as a camp manager to take?
25. Are IDPs registered immediately they arrive at this camp? – (Yes, No, Don't know)
    a. If yes, what details are collected
        i. Where are these details stored?
        ii. What are the information collected used for?
    b. If no, how are IDPs tracked?
26. How do you monitor the IDPs?
27. Is there a Camp management committee? – (Yes, No, Don't know)
    a. How often does your committee meet with all its members?
    b. Does your committee meet with the people living in the camp?
        i. How does the committee meet the people living in the camp, and how often?
        ii. How are public meetings announced?
    c. How does the committee make decisions? - (Vote, Several people deciding, One person deciding)
    d. Does the committee have specific health coordination meetings? – (Yes, No, Don't know) If yes, how often?

Community Participation

28. Are IDPs involved in decision making for camp affairs?
    a. If yes, are they involved in the planning and implementation intervention programs?
        i. If no, why?
        ii. If yes, what type of decisions? Who participates? Who selects them?
29. Are men and women consulted separately? – (Yes, No, Don't know)
30. Are female IDPs involved in decision making? – (Yes, No, Don't know)
    a. If yes, what kind of decisions are women allowed to make?
26. Who are the most vulnerable groups in this camp?
    a. How does the committee get to know the needs of these vulnerable groups?
31. How are information communicated to the IDPs? (Probe: Language, Cultural relevance, Style, Frequency, Period)
32. How would you improve the way your committee works with the IDP camp population?

Appendix 6.3 – Health Service Provider (HSP) interview guide

State: **Camp Name:**

Interviewer Name:

Date: **Time:**

Job Title of Respondent:

Health Services

1. Is there a health service post on the camp? – (Yes, No, Don't know)
    a. What health services are offered on the camp? – (Basic consultations, Basic curative care, Oral rehydration therapy (ORT), Dressings for wounds, Pharmacy, Simple sterilization, Facilities and data collection.
2. If yes, are there health personnel available daily? – (Yes, No, Don't know)

    If not available on camp, how often do health personnel visit the camp? (Daily, Bi weekly, Weekly, Fortnightly, Monthly)

        i. Which health personnel visits the camp? - (Doctors, Nurses, Midwives, Community health workers)

    If no health post, how is health care managed on the camp?
3. Are health service kits made available for IDPs? If yes, which?
    a. Interagency Emergency Health Kit (basic unit and a supplementary unit) – (Yes, No, Don't know)
    b. Minimal initial service package (MISP) (Reproductive Health Kits) – (Yes, No, Don't know)
    c. Nutrition kits – (Yes, No, Don't know)
    d. Delivery kits – (Yes, No, Don't know)
    e. Hygiene kits – (Yes, No, Don't know)

f. Others (state) – (Yes, No, Don't know)

(If yes, verify kit contents and target population)

4. Do you have the following:
    a. Essential drugs (List) – (Yes, No, Don't know)
    b. Basic equipment and supplies. – (Yes, No, Don't know)

(If yes, verify by sighting)

5. Do you offer health education to the IDP community? If yes, outline the content.
6. Are the following services carried out on the camp
    a. Emergency contraception – (Yes, No, Don't know)
    b. Blood transfusion – (Yes, No, Don't know)
    c. Post-exposure prophylaxis (PEP) – (Yes, No, Don't know)
    d. Antibiotics to prevent and treat STIs – (Yes, No, Don't know)
    e. Tetanus toxoid/Tetanus immunoglobulin – (Yes, No, Don't know)
    f. Hepatitis B vaccine – (Yes, No, Don't know)
7. Are other health conditions been observed on this camp?
    a. Psychological trauma – (Yes, No, Don't know)
    b. Reproductive health – (Yes, No, Don't know)
    c. High blood pressure – (Yes, No, Don't know)
    d. Diabetes – (Yes, No, Don't know)
8. Are IDPs referred to other clinics? – (Yes, No, Don't know)
    a. If yes, where? – (Health post, Primary Health Centre, Hospital, Laboratory, Pharmacy)
    b. What cases are referred?

9. For emergency referrals, what kind of transportation is used? – (Bicycles, Motorcycle, Tricycles, Cars, Trucks, Ambulance)
10. Does the referral hospital provide the following: - Emergency surgical and obstetric care, Laboratory services, X-ray services
11. Are all services at the health post offered free of charge to the IDPs? - (Yes, No, Don't know)
12. Are referrals services offered free of charge to the IDPs? - (Yes, No, Don't know)

Health Management

13. Do you identify priority gaps when administering health interventions? – (Yes, No, Don't know)

If yes, how? – (Age, Gender, Illness)

14. Do you diversify appropriate health interventions by groups? – (Yes, No, Don't know)

If yes, how?

15. Have there been any records of illnesses on the camp? – (Yes, No, Don't know)

If yes, how many (fill table below)

S/N	Disease	Children Under - 5	Adolescents (6 – 17 years)	Adolescents (6 – 17 years)	Elderly (60 and above)	Total
1	Acute watery diarrhoea					
2	Bloody diarrhoea					
3	Cholera					
4	Malaria					
5	Tuberculosis					
6	Measles					
7	Acute coughing					
8	Meningitis					

16. Have there been any records of death? If yes, how many?

S/N	Disease	Children Under - 5	Adolescents (6 – 17 years)	Adolescents (6 – 17 years)	Elderly (60 and above)	Total
1	Acute watery diarrhoea					
2	Bloody diarrhoea					
3	Cholera					
4	Malaria					
5	Tuberculosis					
6	Measles					
7	Acute coughing					
8	Meningitis					

17. Is there a surveillance or early warning system for disease outbreak? – (Yes, No, Don't know)
    a. If yes explain
    b. How are infectious disease contraction communicated to the health authorities?
18. Is there a qualified health personnel available from the national health authorities and health relief agencies already present within the camp?
19. Is there an alert threshold for epidemic-prone diseases?
    a. If yes, what are the threshold levels? Have they ever been reached?

S/N	Disease	Alert thresholds	Reached Before
1	Acute watery diarrhoea		
2	Bloody diarrhoea		
3	Cholera		
4	Malaria		
5	Tuberculosis		
6	Measles		
7	Acute coughing		
8	Meningitis		

Vaccination Intervention

20. What type of vaccines is administered from camp health post?

S/N	Vaccine	Yes	No
1	BCG		
2	OPV		
3	DTP		
4	Tetravalent		
5	Pentavalent		
6	Measles		

7	Measles-mumps-rubella (MMR)		
8	Rotavirus		
9	Pneumococcal		
10	Tetanus Toxoid		
11	Tuberculosis		

21. Is there priority setting for administering vaccination?

    a. If yes how is this done?

22. Since inception of this camp how many deaths have occurred?

	Children	**Women**	**Men**
Total Deaths			

Record Keeping

23. Do you have data collection forms for the following:

    a. Health facility visit register – (Yes, No, Don't know)

    b. Daily morbidity data – (Yes, No, Don't know)

    c. Weekly mortality statistics – (Yes, No, Don't know)

    d. Daily medicine consumption form – (Yes, No, Don't know)

    e. Vaccination record – (Yes, No, Don't know)

    f. Referral records – (Yes, No, Don't know)

24. Have you been trained on the following: Policies, Guidelines, Reporting, and Confidentiality? – (Yes, No, Don't know)

Community Participation

25. Are IDPs involved in decision making? – (Yes, No, Don't know)

26. Are they involved in the planning and implementation intervention programs? – (Yes, No, Don't know)

27. Are men and women consulted separately? – (Yes, No, Don't know)

10.4.1.1.6 Appendix 6.4 - Administrative Policy Maker (APM) interview guide

State:

Interviewer Name:

Date: **Time:**

Organisation:

Job Title of Respondent:

Organisation Description

1. What is the mandate of your organisation?
2. What initiatives does your organisation run in the country?
    a. Does this include IDP management? – (Yes, No, Don't Know)
    b. If yes, does the IDP programme have a strategy and action plan? If yes, please explain
3. What is your involvement in the management of IDPs?
4. Are you involved in the following for IDPs:
    a. Project planning – (Yes, No, Don't Know)
    b. Management of the project budget – (Yes, No, Don't Know)
    c. Staff recruitment – (Yes, No, Don't Know)
    d. Office space and project procurement – (Yes, No, Don't Know)
    e. Staff training and monitoring – (Yes, No, Don't Know)
    f. Project/staff security in the field – (Yes, No, Don't Know)
    g. Ongoing project monitoring and management of staff – (Yes, No, Don't Know)
    h. Project assessments/evaluations – (Yes, No, Don't Know)
    i. Phase-out and exit – (Yes, No, Don't Know)

    If yes to any of the above, please explain.

5. What organisation(s) are responsible for IDP Camp Coordination?
6. What organisation(s) are responsible for IDP Camp Administration and Supervision?
7. What organisation(s) are responsible for IDP Camp Management?
8. How often do you visit the camp? Why?

Roles and Responsibility

9. Do you have an established IDP management team in your organisation? – (Yes, No, Don't Know)
    a. What are the overall objectives of the team?
10. Do the members of the team know their roles and responsibilities? – (Yes, No, Don't Know)
    a. Please list the core positions in the IDP management team.
    b. Was each team member pre-informed before assigned to these roles
11. Are the capacities of IDP programme staff assessed in relation to their assignments? – (Yes, No, Don't Know) (backgrounds, experience, strengths and Weaknesses)
    a. If yes how?
12. Are programme staff trained specifically on IDP issues? – (Yes, No, Don't Know)
    a. If yes, how frequently?
    b. What are training aims?

IDP Management Programme

13. Are IDP projects planned for specific groups? – (Yes, No, Don't Know) (Probe: gender, age, environment)
    a. If yes how?

14. What other partners are involved in camp operations? (e.g. CDC, USAID UNHCR, IOM)
    a. In what capacity?
15. Do you have policies and procedures guiding IDP management? – (Yes, No, Don't Know)
    a. If yes, list and explain their content. (request evidence)
    b. If no, what determines your operational approach?

IDP Health Initiative

16. Who is responsible for IDPs health management?
17. What health initiatives are channelled towards IDPs?
    a. Does this include vaccination services?
18. Do you have health specific guidelines? – (Yes, No, Don't Know)
    a. If yes, list and explain their content
    b. If no, what determines your operational approach?
19. Are you involved in vaccination planning for IDPs? – (Yes, No, Don't Know)
    a. If yes, explain your involvement
    b. Please list the immunisation campaigns with dates, duration and achieved numbers your organisation as participated in (request evidence)
20. Is there a standard immunisation plan for IDPs? – (Yes, No, Don't Know)
    a. If yes, describe (request evidence)

IDP Participation

21. Do you think IDPs should participate in projects on the camp? – (Yes, No, Don't Know)

a. Why do you think so?

b. If yes, what roles should IDPs play?

22. Do you think IDPs can add value to camp projects?

    a. Why do you think so?

23. Would you say that the rights and opinions of IDPs understood and protected? – (Yes, No, Don't Know) If yes, how?

Camp Assessment

24. Has a comprehensive needs assessment been conducted for all camps in the State/Country? – (Yes, No, Don't Know)

    a. If yes, when? Do you have a copy of the report?

    b. Who conducted the assessment?

25. Has a situation assessment been conducted for all camps in the State/Country? – (Yes, No, Don't Know)

    a. If yes, when? Do you have a copy of the report? (request evidence)

    b. Who conducted the assessment?

26. Has a communicable disease risk assessment been conducted for all camps in the State/Country? – (Yes, No, Don't Know)

    a. If yes, when? (request evidence)

    b. What organisation conducted the assessment?

    c. Describe the process used in conducting the assessment.