COMMUNITY HEALTH WORKERS DURING THE EBOLA OUTBREAK IN GUINEA

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Community health workers during the Ebola outbreak in Guinea


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Community health workers during the Ebola outbreak in Guinea

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Executive Summary

Community health workers and community-based MNCH services pre-Ebola

Prior to Ebola, the community health system in Guinea had been characterised by poorly integrated vertical interventions carried out by different implementing partners and with variable coverage. CHWs most frequently reported assessing, diagnosing and managing cases of malaria; malaria prevention activities; MNCH promotion and sensitisation activities; and promotion of family planning and distribution of contraceptives. Services in the study districts were managed by implementing partners, who coordinated with the Prefecture Directorates of Health (PDH).

Supply chain management was a major weakness in Guinea’s health system prior to the Ebola outbreak, and stakeholders engaged in the study openly discussed their long-standing concerns about frequent drug shortages and stock-outs. Adequacy of training of CHWs and frequency and quality of supervision varied, and were hampered by limited health staff to carry out supervision. There was also a shortage of data on CHW quality of care or impact of community-based health services. Finally, the lack of sustainable funding and government ownership limited the ability to institutionalize community health services.

Traditional birth attendants (TBAs) acted as the link between pregnant women and health facilities, referring women and encouraging attendance for antenatal care, delivery and family planning. Despite a policy against community delivery, many TBAs continued to perform home deliveries, particularly TBAs who were either not attached to a health facility, or were attached to health facility located some distance from their own village. Traditional healers also played an integral role in the community-level health system, and many community members had a preference for traditional medicine, even for serious bio-medical problems.

Community health workers and delivery of MNCH services during Ebola

Whether community-based MNCH services continued during Ebola varied by NGO, activity, the timing of the outbreak and the Ebola caseload in each prefecture. In Macenta, which experienced Ebola cases early in the outbreak, and in bordering Kérouané, implementing partners initially instructed CHWs to cease malaria case management. In Dubréka and Forécariah, which were affected later and had more time to prepare, CHWs were instructed and supported to continue services following a ‘no touch’ policy. Whilst the Ebola response was ongoing, partners began re-committing resources to strategies aimed at increasing accessibility and utilisation of essential MNCH services. An expansion of community health services included training CHWs to provide integrated community case management (iCCM) for malaria, pneumonia and diarrhoea and screening for malnutrition.

TBAs engaged in the study reported that they performed an elevated number of home deliveries during the outbreak as many pregnant women avoided health facilities in Ebola-affected areas, and because some health facilities closed. Despite CHW sensitisation to utilise health facilities, community members frequently sought care from traditional healers instead, many of whom had limited understandings of Ebola and prevention and protection measures.

Although CHW service utilisation reduced and CHWs faced stigma because of their linkages to health facilities, caregivers in all prefectures confirmed that they were still more likely to seek care from CHWs
than from health facilities that they considered particularly dangerous during the outbreak. Community leaders suggested that since their CHW had been working amongst them for so long, the community-CHW relationship was more resilient than their relationship with less known facility-based health workers. Community leaders also confirmed that the provision of effective treatment by CHWs helped to dispel rumours and re-build community trust in CHWs.

**Community health workers and Ebola-related work**

After the initial phase of the outbreak, implementing an effective community-level response was recognised to be a critical component of the strategy to control the outbreak. The formal response was still slow, however, to include CHWs and they were often sidelined in frontline activities despite their advantageous position within communities and their basic health literacy. Many new community-based workers were quickly recruited by the PDH and Ebola response partners during the initial phase of the response to conduct community-level Ebola-related activities. Over time, as it became apparent that the new recruits were not well accepted or tolerated by communities if they were not resident or previously known, existing CHWs had their duties expanded to include Ebola-related roles, which they conducted either in addition to or in place of their routine MNCH activities. CHWs carried out formal roles as contact tracers and case finders, linking community members to health facilities and providing community based surveillance. They also worked on community engagement and as social mobilisers, and had more informal roles in their communities as ‘caregivers’, bringing food and water to quarantined families. In reality, CHWs often carried out multiple roles, either in parallel or simultaneously, and were active in both formal and informal capacities.

The significant influx of time-limited emergency funds during the outbreak allowed partners in Guinea to offer CHWs and other ‘Ebola workers’ incentives that were inflated compared to normal scales of remuneration. Stakeholders frequently reported variable payment rates depending on the timing and location of their activities, the implementing partner they worked with, and their specific role. Many of the CHWs who conducted social mobilisation activities or case finding under the supervision of their regular NGO or the PDH, received no additional payment despite the risk of exposure associated with this work.

Although CHWs were trusted and respected by the communities they served prior to Ebola, their association with health facilities, the government and international organisations, and their engagement as Ebola responders, resulted in significant fear, mistrust and rejection of CHWs by communities. Despite these challenges, the relationship between CHWs and their own communities proved to be resilient over time. Community members frequently confirmed that close community relationships led them to trust their CHW. In rebuilding levels of acceptance and trust for CHWs, numerous stakeholders emphasised the importance of securing the support of key community actors.

**Community health workers and post-Ebola community-based MNCH programming**

The post-Ebola recovery period has seen a renewed political focus on strengthening Guinea’s health system with a specific focus on the community health system. To guide community health system strengthening the MoH initiated the revision of National Community Health Policy (2016/2017) (RNCHP) and the development of the National Strategic Plan for Community Health (NSPCH, to be validated in 2017). Key aims included increasing the number and equitable distribution of CHWs and coverage of the services they offer; improving coordination and harmonisation of community health programming; improving training, reporting and supervision of CHWs; addressing weak supply chains; improving and extending monitoring and evaluation of community health activities; improving and standardising CHW incentives; increasing
meaningful community participation in the planning, development and governance of the community health system; and ensuring sustainability of community health services. It is notable that the RNCHP places particular focus on improving community participation through a planned strategic approach to establish or re-activate Village Health Committees (VHCs) and Committees of Health and Hygiene (CHHs), and to strengthen multilateral engagement between CHHs, health facilities and municipal governance structures.

However, it remains unclear how these aims of the NSPCH will be achieved and operationalised. A key challenge to implementing a broad portfolio of CHW activities may be linked to securing external funding, and there was a sense that donors may not be able or prepared to fund broader CHW programmes if they were not specifically aligned to their own, at times, narrower operational objectives. Additionally, significant concerns were raised by stakeholders at all levels about the capacity for future emergency preparedness given the lack of sustainable health system capacity that was built during the Ebola outbreak. Concern was also expressed about the community based surveillance (CBS) system, which, although strengthened during the response, had quickly reverted to being weak and less rigorous.

Conclusions

The results of this study show mixed results in terms of resilience of community-based MNCH services in Guinea. Whether case management services continued was dependent on several factors, including instructions from the NGO partner and whether an area experienced Ebola transmission earlier or later in the outbreak. In areas that were affected later, stakeholders had more time and resources to prepare, and therefore were more likely to continue services. When CHWs were instructed to continue and were trained on the ‘no touch’ protocol, many CHWs remained active in their communities and were willing to continue providing health-related services. Although CHWs faced mistrust and stigma because of their ties to health facilities, they were better able to gain the trust of community members because of their longstanding relationships. Respondents at all levels consistently affirmed that CHWs played an integral role in the Ebola response at the community level, carrying out contact tracing, case finding, social mobilisation and community engagement, and informal caregiving to sick community members.

In addition to CHWs, this study showed the importance of engaging other key community members. Engagement of trusted and respected community leaders was also crucial to mounting an effective community response to the emergency. Furthermore, TBAs played an important role in supporting maternal health and traditional healers gained increased prominence as trust in health workers diminished, often performing their duties without adequate infection protection. However, TBAs and traditional healers were not adequately supported or engaged in the response. In an emergency, all of these community actors should be immediately engaged in a coordinated response. The establishment of village development committees would further facilitate mobilization and coordination at the community level.

These findings support the hypothesis that the establishment of strong community-based health services through CHWs, along with engagement of other key community actors, will increase both health system and community resilience in emergencies. The new national community health policy provides a strong foundation for strengthening the community health system. However, it is unclear how this policy will be operationalised and financed. Furthermore, there are critical service delivery weaknesses, especially regarding the supply chain, training, supervision, and transportation for referral, that were present before, during, and after Ebola. It will require health system strengthening at all levels to address these challenges. There is also a need for rigorous assessments of CHW quality of care and impact of community-based services on maternal and child health outcomes. These issues will have to be resolved for the initiative to have a significant impact.
Although the Ebola outbreak and its impact could not have been predicted, we can anticipate that some form of emergency, such as disease outbreak, conflict or natural disaster, will occur again in Guinea. To avoid some of the pitfalls seen during the Ebola outbreak, such as poor coordination of activities and unclear policies, emergency preparedness and response plans should be incorporated into the trainings of CHWs, VHCs, CHHs, TBAs, traditional healers, health facility staff, and other actors involved in health service delivery. Furthermore, it will be essential to improve community trust in the health system to improve healthcare seeking and facilitate behaviour change, especially in emergencies. Finally, in an emergency, a balance must be struck between responding to the emergency and continuation of routine services.
<table>
<thead>
<tr>
<th>Acronyms</th>
<th>Description</th>
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<tbody>
<tr>
<td>AACG</td>
<td>Association des animateurs communautaires de Guinée</td>
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<tr>
<td>ACT</td>
<td>Artemisinin-based combination therapy</td>
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<td>ADRA</td>
<td>Adventitious Agency for Development</td>
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<td>AGBEF</td>
<td>Guinean Association for the Wellbeing of Families</td>
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<tr>
<td>AIDS</td>
<td>Acquired immunodeficiency syndrome</td>
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<td>ANC</td>
<td>Antenatal care</td>
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<td>ARI</td>
<td>Acute respiratory infection</td>
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<td>BeMOnC</td>
<td>Basic emergency obstetrics and newborn care</td>
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<td>C4D</td>
<td>Community for development</td>
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<td>Community-based organisations</td>
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<td>CDC</td>
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<tr>
<td>CemOnC</td>
<td>Comprehensive emergency obstetrics and newborn care</td>
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<tr>
<td>CHH</td>
<td>Committee of Heath and Hygiene</td>
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<tr>
<td>CHW</td>
<td>Community health worker</td>
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<td>CJMAD</td>
<td>Comite Jeunes Mon Avenir d'Abord</td>
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<td>CWC</td>
<td>Community Watch Committee</td>
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<tr>
<td>DoD</td>
<td>Department of Decentralisation</td>
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<tr>
<td>EmOnC</td>
<td>Emergency obstetric and neonatal care</td>
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<tr>
<td>ETU</td>
<td>Ebola treatment unit</td>
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<td>EVD</td>
<td>Ebola virus disease</td>
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<td>FGD</td>
<td>Focus group discussion</td>
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<td>FUDD</td>
<td>Femmes Unies pour le Développement Durable</td>
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<tr>
<td>GAVI</td>
<td>Global Alliance for Vaccines and Immunisation</td>
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<td>GNF</td>
<td>Guinean Franc</td>
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<td>GZT</td>
<td>German Technical Cooperation</td>
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<td>HAT</td>
<td>Human African trypanosomiasis</td>
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<td>HIV</td>
<td>Human immunodeficiency virus</td>
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<td>HKI</td>
<td>Helen Keller International</td>
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<tr>
<td>iCCM</td>
<td>Integrated community case management</td>
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<tr>
<td>IMC</td>
<td>International Medical Corps</td>
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<tr>
<td>I/NGO</td>
<td>International/non-governmental organisation</td>
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<td>IOM</td>
<td>International Organisation for Migration</td>
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<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>IPC</td>
<td>Infection prevention and control</td>
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<tr>
<td>IRD</td>
<td><em>Institut de Recherche pour le Développement</em></td>
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<tr>
<td>ITN</td>
<td>Insecticide treated bed-net</td>
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<tr>
<td>JHPIEGO</td>
<td>(Formally Johns Hopkins Program for International Education in Gynecology and Obstetrics)</td>
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<tr>
<td>KII</td>
<td>Key informant interview</td>
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<td>MCHIP</td>
<td>Maternal and Child Health Integrated Programme (USAID)</td>
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<td>MDGs</td>
<td>Millennium development goals</td>
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<tr>
<td>MNCH</td>
<td>Maternal, newborn and child health</td>
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<td>MoH</td>
<td>Ministry of Health</td>
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<tr>
<td>MSF</td>
<td><em>Médecins Sans Frontières</em></td>
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<tr>
<td>MUAC</td>
<td>Mid-upper arm circumference</td>
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<tr>
<td>NCHP</td>
<td>National Community Health Policy (2012)</td>
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<td>NDPCH</td>
<td>National Directorate for Preventative and Community Health</td>
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<td>NECC</td>
<td>National Ebola Coordination Committee</td>
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<td>NHDP</td>
<td>National Health Development Plan (2003 - 2012)</td>
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<td>NHIS</td>
<td>National health information system</td>
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<td>NIS</td>
<td>National Institute of Statistics Guinea</td>
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<td>NSPCH</td>
<td>National Strategic Plan for Community Health (2015- 2019)</td>
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<td>ORS</td>
<td>Oral rehydration salts</td>
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<td>PECC</td>
<td>Prefecture Ebola Coordination Committee</td>
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<td>PDH</td>
<td>Prefecture Directorate of Health</td>
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<td>Postnatal care</td>
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<td>Personal protective equipment</td>
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<td>PSI</td>
<td>Population Service International</td>
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<tr>
<td>RDT</td>
<td>Rapid diagnostic test</td>
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<tr>
<td>RH/FP</td>
<td>Reproductive health / Family planning</td>
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<td>RNCHP</td>
<td>Revised National Community Health Policy (2016)</td>
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<td>RTI</td>
<td>Research Triangle Institute</td>
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<tr>
<td>SMTF</td>
<td>Social Mobilisation Task Force</td>
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<tr>
<td>TB</td>
<td>Tuberculosis</td>
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<tr>
<td>TBA</td>
<td>Traditional birth assistant/attendant</td>
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<td>THA</td>
<td>Traditional Healer Association</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<td>UNDP</td>
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<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<td>Acronym</td>
<td>Full Form</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>VHC</td>
<td>Village Health Committee</td>
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<td>WAHO</td>
<td>West African Health Organization</td>
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<td>WASH</td>
<td>Water sanitation and hygiene</td>
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<td>World Health Organization</td>
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Introduction

Background and regional context of EVD in West Africa

The epidemic of Ebola Virus Disease (EVD) that began in south-eastern Guinea in December 2013 spread across West Africa affecting thousands of people in Guinea, Sierra Leone and Liberia, in addition to smaller but connected outbreaks globally (Aylward et al 2014). In August 2014, the World Health Organization (WHO) declared Ebola to be a Public Health Emergency of International Concern (PHEIC). Nineteen months later, when the emergency was declared over in March 2016, the cumulative number of confirmed, probable, and suspected EVD cases in the three most affected countries was 28,610 and the number of confirmed deaths was 11,308 (WHO 2016a). Over 16,000 children were registered as having lost at least one of their primary caregivers during the outbreak (UNICEF 2015a). The 2013-2016 outbreak of EVD in West Africa was the largest recorded epidemic since the virus was discovered in 1976 (Bah et al 2014). Unlike previous outbreaks that were largely focused in rural areas, the West Africa outbreak affected both rural and urban areas, including the capital cities of Freetown, Monrovia and Conakry. Over 90% of reported cases arose from 14 of the three countries’ 67 districts, indicating intense transmission in these areas (Bah et al 2014; Aylward et al 2014).1

The Humanitarian Policy Group concluded that ‘at best’, the initial response of the national health systems failed to halt the early spread of the disease, and ‘at worst’ contributed to the epidemic reaching record proportions (HPG 2015). The rapid spread of EVD quickly overwhelmed the fragile public health system. From the index case identified in southeast Guinea in December 2013, 3,358 laboratory confirmed cases and 2,544 deaths have been recorded in the country, plus a further 456 ‘probable and suspected’ Ebola cases (CDC 2016).

The Ebola crisis underscored chronic weaknesses and vulnerabilities in Guinea’s national health system. There was a history of insufficient public funds being dedicated to the health sector (4.2% of the government’s annual budget was spent on healthcare in 2016 according to UNICEF); a heavy reliance on declining foreign aid and out-of-pocket expenditure on healthcare (UNICEF 2012); a chronic shortage of well-equipped health facilities and skilled healthcare workers; weak drug procurement systems and supply chains; limited and inequitable access to facility-based care (GAVI 2009); and widespread low uptake of health system services (USAID 2015). Consequently, the status of maternal, newborn and child health (MNCH) remained poor in Guinea prior to the Ebola outbreak. The 2012 Demographic Health Survey reported that maternal mortality was 724 per 100,000 live births (NIS and MEASURE DHS 2013). Under-five mortality also remained high, although it had fallen from 238 deaths per 1,000 live births in 1990 to 94 per 1,000 in 2015 (IGME 2015).

In 2015, it was reported that the country had just 15 fully functioning emergency obstetric and neonatal care (EmONC) centres (Greenwell and Winner 2014). This was equivalent to less than one (0.67) EmONC centre per 500,000 persons, although the WHO recommendation is five EmONC centres per 500,000 persons (ibid.). The majority of health facilities lacked basic equipment needed to care for newborns (e.g. scales, heat lamps, oxygen). There were also shortages in the health workforce, and in 2016 the WHO reported that Guinea had 1.4 skilled health personnel (doctors, nurses and midwives) for every 10,000 people, a great shortfall from the 23 skilled health personnel per 10,000 recommended by the WHO as necessary to provide essential maternal and child health services (WHO 2016b). Prior to the Ebola outbreak, it was estimated that nationally, Guinea had just 30% of the skilled health workforce required for MNCH services (UNFPA 2014). Availability of MNCH services was particularly limited outside the capital and there was an inequitable distribution of skilled health

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1 As of September 2014, the 14 most heavily affected districts were Kenema, Kailahun, Western Area Urban, Bombali, Port Loko, and Moyamba (Sierra Leone); Lofa, Montserrado, Bong, and Grand Bassa (Liberia); Guéckédou, Macenta, Conakry, and Boffa (Guinea) (Aylward et al 2014). Two border districts between Guinea and Sierra Leone – Forecariah and Kambia, would later be included as areas of intense transmission.
workers. An estimated 29% of the country’s physicians and 61% of midwives practiced in Conakry (GAVI 2009). Limited availability, accessibility and acceptability of MNCH services resulted in persistently low utilisation, particularly in rural areas. In 2013, only 46% of births in Guinea were attended by skilled healthcare personnel (WHO and UNICEF 2013) and in rural areas only 29% were facility births (Jansen et al 2014). Moreover, the use of contraception by women of reproductive age was reported to be only 7% (NIS and MEASURE DHS 2013).

The Ebola outbreak further exacerbated patterns of low MNCH service utilisation in Guinea. Reduced service uptake during the outbreak was primarily attributed to mistrust of health workers and fear of contracting Ebola at health facilities (Ministère de la Santé and UNICEF 2015). Such fears were not unwarranted given that limited capacity for infection prevention and control (IPC) measures at health facilities led to the infection (confirmed and probable) of 199 healthcare workers in Guinea (WHO 2015). A rapid assessment of MNCH health services during the Ebola outbreak reported that attendance at antenatal clinics declined by 10% nationally and births attended by skilled personnel decreased by 29% (Ministère de la Santé and UNICEF 2015). Jhpiego reported that whilst skilled birth attendance in ‘low Ebola impact regions’ was not affected between December 2013 and September 2014, in ‘high Ebola impact regions’ numbers declined by 87% during the same time period (Jhpiego 2014). In terms of child health, a rapid assessment of 45 public facilities reported significant declines in cases of diarrhoea in children under five presenting at hospitals (60%) and health centres (25%) during the Ebola outbreak (Barden-O’Fallon 2015). Similarly, children under five presenting with acute respiratory infections reduced by 58% at hospitals and 23% at health centres. The uptake of vaccination services was also significantly affected, with a 32% decline in Penta-3 vaccinations being given at health centres (ibid.).

Although MNCH service utilisation declined, the majority of health facilities across Guinea appear to have remained open during the crisis (Barden-O’Fallon 2015). The rapid assessment concluded that only 15% of 45 public facilities surveyed had closed, and 13% had suspended their services for a period of time (ibid.). It should be noted, however, that just because facilities were open, they did not necessarily have sufficient staff or supplies to rapidly implement effective Ebola IPC strategies or provide high quality MNCH care.

In re-building the health system after Ebola, it has been widely acknowledged that strengthening resilience at the community level is critical, and there is a resurgence in interest to use community health workers (CHWs) to deliver primary health services. The work of CHWs in the West African Ebola outbreak has been repeatedly highlighted in recent UN, INGO and governmental reports that advocate for increasing the numbers of CHWs globally to build resilience, strengthen health systems, and provide the capacity to respond to community health needs in future emergencies and disasters (UN 2015; Obilade 2015). Recent investments in CHW recruitment and training across the three countries suggests that a cadre of CHWs should play a key role in strengthening public health systems in the context of chronic human resources constraints. In the post-Ebola health recovery plans drafted by the Governments of Liberia, Sierra Leone and Guinea, however, there are limited details about how to develop and operationalise community-level resilience. This study was carried out to provide detailed information on the work of community-level actors during the Ebola outbreak with the goal of informing efforts to strengthen community health systems and build resilience in future emergencies.

Core objectives and study aims

The purpose of the research was to provide evidence for UNICEF to support the Governments of Guinea, Liberia and Sierra Leone as they implement their post-Ebola health recovery plans and strengthen community-level health systems. The study had four key objectives:

• To document the effect of EVD on decreasing the functionality and utilisation of community-based MNCH services.
• To document and assess the intended and actual contribution of CHWs to the EVD response.
• To identify how CHWs could have been more effectively used and supported in the EVD response.
• To determine lessons learnt and recommendations for early recovery, health systems strengthening, and ensuring future resilience of MNCH services.

While CHW roles and activities are diverse, the study concentrated specifically on CHW MNCH interventions. The full range of MNCH interventions were covered, including activities aimed at promoting MNCH or preventing disease with a particular focus on community case management (CCM) of priority childhood diseases. CCM is an equity-focused strategy to deliver lifesaving curative interventions for the most common childhood illnesses, particularly in areas where there is little access to facility-based services. In this report, CCM is used to refer only to the CCM of malaria. Integrated community case management (iCCM) refers to the integrated management of childhood malaria, diarrhoea and pneumonia (WHO and UNICEF 2012).

Report structure and outputs

This report focuses on Guinea. Similar country-specific reports have been produced for Liberia and Sierra Leone.

Following the introduction, the study’s methods are outlined in detail. The research findings are then presented in four substantive chapters arranged chronologically. Chapter 1 focuses on community health workers and community-based MNCH services pre-Ebola. Chapter 2 focuses on the delivery of MNCH services by community health workers during the Ebola outbreak. Chapter 3 focuses on the Ebola-related work conducted by community health workers. Chapter 4 focuses on community health workers and post-Ebola community-base MNCH programming. All chapters are structured according to the eight benchmarks of integrated Community Case Management (iCCM): 1) Coordination and policy; 2) Costing and financing; 3) Human resource management; 4) Supply chain management; 5) Service delivery and referral; 6) Communication and social mobilisation; 7) Supervision and performance quality assurance; and 8) Monitoring and evaluation and health information systems. ² This structure was developed by UNICEF to facilitate the comparison of any one component across the three distinct periods of study (pre-, during, and post-Ebola). Each chapter is preceded by a narrative that presents the personal accounts of participants engaged in the study.

² For further details on the eight benchmarks of iCCM refer to McGorman 2012; MCHIP 2013.
Methodology

The research was conducted in line with prevailing ethical principles to protect the rights and welfare of all participants. Permission to undertake the research was granted by the Ministry of Health (MoH) of Guinea and supported by the UNICEF Country Office in Conakry, Guinea.

Rationale for research site selection – Dubréka, Forécariah, Macenta, Kérouané

In selecting the research sites for the study, three key questions were posed:

- Was the location significantly impacted by Ebola? (Did the location have a high-level of EVD transmission at any period during the 2014-16 outbreak?)
- Did the location have established iCCM (or other community-level MNCH programming) by CHWs prior to the Ebola outbreak?
- Did the location’s population have differential levels of healthcare access? (i.e. did locations include communities that had easy accessibility to health facilities and communities that faced more complex access challenges?)

When selecting prefectures and specific fieldsites that adhered to the above requirements, the aim was to include urban, peri-urban and rural locations, and to ensure diversity in population groups (ethnicity, religion, gender).

In consultation with the MoH and in line with the above criteria, four prefectures were selected: Dubréka, Forécariah, Macenta and Kérouané. Within each prefecture except Macenta, CHW programmes were implemented by a local NGO with technical oversight provided by an INGO. At the time of the study, in both Dubréka and Forécariah, the INGO RTI supported the local NGO CJMAD. In Kérouané the INGO PLAN International supported the local NGO FUDD. In Macenta the INGO AACG was the key implementing partner. Specific fieldsites (sub-prefectures and communities) were selected in collaboration with the INGO and in Dubréka, Forécariah and Kérouané, also with local NGO implementing partner. In Dubréka, Forécariah and Macenta, the CHW programmes included in the study were supported by UNICEF, which provided funding to the INGO partners and technical expertise to both the NGO partners and Ministry of Health. UNICEF did not support the CHW programming of selected partners PLAN International and FUDD in Kérouané. The table below outlines key details about the fieldsites and a map of Guinea is presented in Appendix 1.

Data collection

Intensive data collection and in-country fieldwork was conducted over 20 days in July-August 2016 (see schedule in Appendix 2). Based upon the rapid review of literature and programme documentation, and building upon a research protocol, a series of methodological tools were developed including semi-structured interview and focus group discussion (FGD) frameworks (see Appendix 3). The tools included a broad spectrum of research questions and probes arranged around six key themes: iCCM programming or other community-based MNCH services provided before, during or after the Ebola outbreak; roles and responsibilities during the EVD response; implementing partner coordination; CHW roles before, during and after the Ebola outbreak; impact of EVD on MNCH service provision; and lessons learnt during the outbreak for strengthening health systems in the future. The key themes were addressed in each interview and focus group and therefore allowed analysis of themes across participant groups and fieldsites. The research was designed to facilitate
input from multiple stakeholders using a phased approach, so that issues raised by one group of interlocutors could be discussed with other groups of stakeholders as appropriate. This ensured the collation of in-depth material and the rigour of its validation and triangulation.

Informed consent

At the start of each interview and focus group, it was made clear to all potential participants that their involvement was optional and voluntary, and would not affect any future medical services and/or community benefits needed or received. The study’s consent form (see Appendix 4) was presented, explained in detail and read aloud for illiterate participants. The contact details of the UNICEF focal person for the research was provided on each consent form and given to community leaders for their records. A copy of the consent form was given to all participants who requested it. All research participants gave informed consent by signature and/or thumbprint.

Participants and recruitment

Study participants were selected using purposive, non-probability sampling. A total of 193 participants were enrolled across the four prefectures, and 68 data collection activities were undertaken. Forty-four in-depth interviews were conducted with 58 participants, and 24 FGDs were conducted with 135 participants.

At the national level, key informants (policy makers) were selected for informal interview and/or semi-structured interview if they had a detailed knowledge of and/or were involved in community MNCH services either pre- or post-Ebola, and/or with the Ebola response. All 13 national-level interviews were conducted in Conakry. Representatives were interviewed from the MoH, UNICEF, UNFPA, WHO, USAID and INGO CHW programme implementing partners PSI, Plan International and RTI.

At the prefecture level, informants selected for interview included a purposive sample of key community MNCH implementing partners: RTI, PSI, CJMAD, AACG and FUDD. Representatives from the Prefecture Directorate of Health (PDH), local government authorities and Traditional Healer Associations were also interviewed.

At the community-level, informants selected for semi-structured interview or to participate in focus group discussions included community leaders; traditional healers; caregivers of children under five; community health workers (CHWs); health centre chiefs; traditional birth attendants (TBAs); and EVD survivors.

The number and distribution of participants by prefecture, activity and stakeholder group, and their demographic details are presented in a series of tables in Appendix 5.

Data transcription and analysis

At the end of data collection, the audio recordings of all interviews and FGDs were transcribed into English. Anonymised transcripts were produced in Microsoft Word. The transcripts were reviewed by PM for accuracy and were cross-referenced with the research team’s fieldnotes. Any areas of inconsistency were resolved after an additional review of the original audio file.
### Table 1. Fieldsites

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<tbody>
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<td>GR. Kindia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ouassou Health Centre • Dubréka Town Health Centre</td>
<td>Ouassou</td>
<td>15,647</td>
<td>Koubia</td>
<td>HP (in village)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>P. Forécariah</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Kourira • Farmoriah Health Centre • Bokaria Health Centres</td>
<td>Kourira</td>
<td>25,505</td>
<td>Samatran</td>
<td>20km (HC)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>GR. Kindia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Farmoriah Health Centre • Bokaria Health Centres</td>
<td>Farmoriah</td>
<td>33,057</td>
<td>Seremodia</td>
<td>20km (HP)</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>P. Macenta</td>
<td>278,456</td>
<td>7,056</td>
<td>34.2 (43.9)</td>
<td>110</td>
<td>43.5</td>
<td>41,730</td>
<td>395</td>
<td>Daro Health Centre</td>
<td>Sérédou</td>
<td>20,249</td>
<td>Irié</td>
<td>HP (in village); 20km (HC)</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>GR. Nzérékoré</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Banakoro • Gnalemoridou Health Post</td>
<td>Banankoro</td>
<td>66,597</td>
<td>Fodessiaya</td>
<td>HC (in town)</td>
<td>No</td>
<td>No</td>
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<tr>
<td>P. Kérouané</td>
<td>207,547</td>
<td>7,020</td>
<td>40.4 (36.4)</td>
<td>194</td>
<td>39.8</td>
<td>41,883</td>
<td>458</td>
<td>Banakoro • Gnalemoridou Health Post</td>
<td>Komodou</td>
<td>21,584</td>
<td>Gnalemoridou</td>
<td>16km (HC) HP Established in village post Ebola</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

1. Guinea is divided into 8 government regions. The national capital Conakry represents one region while the other 7 regions are subdivided into 33 prefectures. Guinea can also be divided into four natural regions with distinct geography.
2. NIS 2014.
4. NIS and MEASURE DHS 2013.
5. NIS and MEASURE DHS 2013.
6. Including BCG, measles, the three doses of DTP / Penta-valent vaccine and the three doses of polio vaccine, excluding the dose of polio given at birth.
7. NIS and MEASURE DHS 2013.
8. WHO 2016c.
9. WHO 2016d.
Dominant themes were identified through the systematic review of interviews, FGDs and observations. The occurrence and reoccurrence of salient concepts were labelled and emerging trends critically analysed according to the research objectives. All qualitative data were coded and analysed by hand, and the demographic data of participants was analysed in Excel.

Methodological limitations and data collection challenges

In qualitative research, there is always a risk associated with misinterpretation and the possibility that respondents provide what they perceive to be socially-correct answers or withhold sensitive information. Attempts were made to mitigate these risks by the research team working closely together to plan translation styles in advance and decide how to best capture colloquialisms, abstractions, idiomatic expressions and jargon. Careful phraseology was used when posing questions. Sections of narrative were back translated to confirm or clarify participant statements. Participants were encouraged to speak openly. Due to existing decrees prohibiting the use of traditional healers and home deliveries, it was possible participants withheld some information relating to these practices.

The limited time and resources for this study demanded prioritising engagement with stakeholders at prefecture and community levels. The maximum possible number of interviews and focus group discussions were conducted at each fieldsite given the time and operational constraints. Accessing a number of the fieldsites was challenging due to poor road conditions and resulted in lengthy travel times. In order to complete the necessary FDGs and interviews scheduled each day, it was not possible to access remote villages located more than two hours from the central town. This may have biased responses relating to health seeking behaviour and referral compliance.

The criteria for fieldsite selection communicated to prefecture-level NGO implementing partners (both via email and in initial meetings in each prefecture) was not always accurately interpreted by staff facilitating the study, particularly in Macenta. There, the first fieldsite visited did not meet the selection criteria. Although it had been directly affected by EVD, no CHWs were active and consequently this fieldsite was not included in the analysis. Two further fieldsites were visited in Macenta. Both fulfilled the selection criteria and were included in the analysis.

While every attempt was made to conduct the FGDs in privacy, in a small number of communities it was challenging to find a private location and in a few instances other community members insisted on observing the FGD. This may have reduced the willingness or ability of some female caregivers to speak openly given the close proximity of male community members and community leaders.

In some communities FGD participants expressed an unwillingness to fully participate because they would not be remunerated for their involvement. This may also have had a negative impact on the detail or level of accuracy of information conveyed. To mitigate this, it was carefully explained during the consent process that participation was voluntary, but that the length of the FDG would be limited in recognition of participants’ other, sometimes competing, commitments. In appreciation of their participation, all focus group discussants were invited to share lunch after the session.

If the research team needed clarification of a response given in a local language, a community member was asked to provide additional explanation or translate between the local language and French or English. Every effort was made to select a local translator who would not influence the group discussions (for example, community leaders were avoided and a female community members was selected for caregiver FGDs). The need for exact translation without interpretation or summary was explained in detail to the community translator and the research team checked sections of narrative to ensure accurate translation.
The communities included in the research were selected by INGO/NGO implementing partners and, as per local custom, NGO staff accompanied the research team to make introductions to both the sub-prefecture council and the community. This may have encouraged communities to overstate their use or support of CHWs. To minimise any potential bias, the NGO implementing partner made introductions between the research team and community, but then left the research site and did not participate in any of the FGDs.

In Guinea, there is a diverse landscape of NGOs working with CHWs to deliver community-based MNCH-related services. As far as possible, the stakeholders had been mapped in advance of data collection. It was not possible however to include all stakeholders in this study and the UNICEF country office prioritised the inclusion of NGOs engaged with CCM programming in each prefecture. During data collection, attempts were made to further detail and cross-reference the mapping of stakeholders delivering CHW-related services. Information provided at national, prefecture and local levels was limited and at times conflicting. It was difficult to reliably trace which organisations were doing what, where, and when. This lack of coordination across organisations is considered an important finding, but did present methodological challenges. It was notable, however, that all the fieldsites selected, except Kérouané, were locations for CHW programmes supported by UNICEF. NGOs in each prefecture that implemented CHW programmes may have provided different community-based services (e.g. community case management of malaria or family planning), but their iCCM programming was supported by UNICEF.
Before Ebola we worked with different NGOs and each had its own programme, strategy and reporting system. We were treating children for malaria in our communities, sensitising women at the earlier stage of their pregnancies to go to health centres, sensitising young mothers to breastfeed their children, and advising mothers with malnourished children.

Before Ebola, sensitising the community was a great challenge because people were used to going to traditional healers, or would prepare herbs for themselves when they were sick instead of going to the hospital or coming to us for treatment. It was very difficult for them to understand us.

Another challenge we faced before Ebola was that the villages we covered were very far apart from each other and the cost of transportation was a problem. When we travelled for the community health work, it would be late before we would return home to attend to our farms and to cater for our own family’s survival. This was hard because the community health work we were doing was voluntary and with no payment.

CHW, Kerouané
1. Community health workers and community-based MNCH services pre-Ebola

Structured around the eight iCCM benchmarking components, this chapter analyses community-based MNCH programming and the work of CHWs before the Ebola outbreak.

1.1 Coordination and policy

Community health and related policies

In 2003, the Guinean Ministry of Health (MoH), in collaboration with partners, launched the National Health Development Plan (2003-2012) (NHDP). Recognising the need to reduce maternal and under-five mortality, the NHDP included policies that strategically prioritised increasing access to promotional, preventative and curative MNCH services. The NHDP target was to reduce under-five mortality to 90 deaths per 1,000 and maternal mortality to 528 deaths per 1,000. This was not achieved, and improvements in MNCH indicators were restricted by low and inequitable service accessibility, limited availability of essential medicines and skilled health workers, weak coordination of the health sector and under-funding (GAVI 2009). In a renewed attempt to accelerate progress towards MDGs 4 and 5 relating to maternal and child health, the MoH implemented a limited series of health reforms aimed at addressing key barriers and bottlenecks. In 2010, the government introduced a policy to ensure essential maternal and neonatal health services were provided free of charge, although it was not extended to include essential health services for children under five.

Prior to 2012, the community health system in Guinea had been characterised by poorly integrated vertical interventions. The majority of interventions had been funded by external donors and implemented inequitably across the country by numerous local and international NGOs (Ministère de la Santé 2015). This created a complex landscape of community health services. Over twenty different initiatives were implemented. Community health agents, referred to in this study as Community health workers (CHWs), are defined by the MoH as people from the community who have received short-term training to provide community-level services (Ministère de la Santé 2012). CHWs were recruited by the MoH or NGO partners to deliver services under each initiative. These include MNCH promotional activities (for example promotion of antenatal clinic attendance, facility-based deliveries and exclusive breast feeding); malaria prevention (including the distribution and promotion of the use of insecticide-treated bednets); community-based treatment of malaria, diarrhoea and pneumonia; sensitisation on family planning and distribution of contraceptives; screening for malnutrition; community distribution of Ivermectin for onchocerciasis; childhood immunisations; community screening for leprosy and surveillance of acute flaccid paralysis and maternal and neonatal tetanus. Without a national CHW policy, selection criteria, level of training, incentives and supervision of CHWs was largely

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3 Interventions included the Family Planning Project in the Forest and High Guineas regions (1997); Initiative for Food Security in Dinguiraye and later in Dabola (1997-2007) by AFRICARE; Initiative for Maternal and Child Health in Dabola implemented by AFRICARE with USAID funding (1997-2003); Reproductive Health Project implemented by Save the Children in Mandiana and Kouroussa (1998-2007); Strengthening of Interventions in Maternal and Child Health Project in the Forest and High Guinea regions (1998-2006); Enhancement of Safe Motherhood Programme in Dabola, Mandiana and Siguiri (2000-2007); Nutrition Project implemented in Conakry by ADRA (2001-2009); Food Security Project in Pita and Telémélé by OIC and HKI (2005-2009); HIV/AIDS Programme in Faranah, Labé and Mamou supported by GTZ (2001-2009); the Community-Based Family Planning Services Programme in Lower and Middle Guinea regions (2009-2011); the River Blindness Project by AGBEF/HKI (2006-2012); community-based family planning services and activities to support pregnancy and childbirth risk reduction in Low and Middle Guinea; the Reproductive Health and the Rights of Women Programme in the regions of Faranah, Labé and Mamou in partnership with the GTZ (2009-2012); the Malaria Community Case Management Programme implemented by MSF in Guéckédou (2012); a pilot project for the provision of Depo provera by CHWs in Mandiana implemented by MCHIP and JHPIEGO with USAID funding (2012); and the national Integrated Management of Childhood Illnesses Programme (2000-2012) supported financially and technically by WHO, UNICEF, USAID, Save the Children, PLAN Guinea, JHPIEGO, MCHIP, the World Bank and UNFPA.
determined by the organisation implementing each specific community-based MNCH intervention. Community involvement in the planning and implementation of these interventions was limited and monitoring, evaluation and accountability mechanisms were weak.

Community health was recognised as important component of the MNCH strategy, and in 2012 the MoH launched the National Community Health Policy (NCHP). This was intended to serve as a formal framework to coordinate and harmonise community-level health interventions and promote community participation in health. It broadly outlined the role and responsibilities of key community health actors, described the selection criteria for CHWs and stipulated a standardised monthly financial incentive at GNF 100,000 (approximately USD 11). Whilst it provided an example of a package of CHW MNCH services (including MNCH promotion, community case management of malaria, diarrhoea and pneumonia, and screening for malnutrition in children under five), the policy did not define a minimum package of CHW services. The NCHP stated that the MoH would develop standardised training programmes, supervision and reporting tools, and monitoring and evaluation frameworks to support the implementation of the policy, but these mechanisms had not been established prior to the Ebola outbreak. There was a persistent lack of clarity about CHW standards and how the ‘harmonisation’ of community health interventions would be operationalised, and few practical changes had been made to the poorly integrated vertical community health programming structure prior to Ebola.

The lack of detail in the NCHP reflected a general lack of consensus within the MoH regarding the community health strategy. While the National Directorate of Preventative and Community and Health (NDPCH) within the MoH was responsible for the development of CHW policies, there remained uncertainty amongst NDPCH staff regarding the role of CHWs in community health. As one stakeholder commented, ‘I don’t really know if those of us working in the MoH really understand the importance and role of CHWs’. Many NDPCH staff considered CHWs primarily as health promoters and as one national-level stakeholder concluded, ‘We kept on asking ourselves in the MoH, is the community health service supposed to start from the village or are health centres also part of the community?’.

Despite the NCHP, fragmented coverage and variations in community health programming continued, and there appeared to be little motivation within the MoH to shift away from the structure of vertical programming. A number of MoH representatives engaged in the study confirmed that partners continued to select activities from the package of CHW services and that numerous community health programmes continued to be implemented with limited integration or coordination. As a representative from one implementing partner explained,

In the package of CHW activities prepared by the MoH there are many different activities. We look and choose the ones that we can handle, particularly those that match with our priorities relating to maternal health. For example, promotion of facility-based deliveries or follow-up for post-natal complications. We will take that activity and implement at community level.

Representatives from the Prefecture Directorate of Health (PDH) were largely supportive of the role of CHWs and considered them to be an integral part of the health system. As one PDH representative affirmed, ‘The CHWs are the link or the bridge between us and the communities, so to help implement the activities at the community level we need to use them to facilitate the implementation of those activities’. In the NCHP, responsibility was given to the PDH to develop the community health plan of action for the prefecture, to ensure coordination of CHW activities, provide oversight of implementation, and monitor and evaluate CHW activities. Overall, the perceptions of PDH representatives engaged in the study were aligned with the NCHP. As one explained,

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4 Exchange rate of USD 1 / GNF 9216 (UN operational exchange rate, 1 December 2016).
The PDH is in charge of all the activities of health at the community level. They have the responsibility to chair the implementation of those activities in the prefecture, they are supposed to do the follow up and supervise implementation of the CHW activities. The director is supposed to do the monitoring of activities and give the report every six months. We work in good collaboration with all the partners involved in the maternal and child healthcare system.

Despite this, it was difficult to identify practical examples of the PDHs’ close involvement in CHW activities prior to Ebola. It was frequently reported that the PDH had insufficient resources and limited organisational structures to adopt the roles outlined. In many PDHs, the position of CHW focal person was left empty, and in the PDHs where they had been appointed, prefecture-level stakeholders confirmed they were significantly under-resourced. Rather, these stakeholders explained that the PDH functioned primarily as a ‘gate-keeper’ to the community. INGOs would seek permission from the PDH to roll out select community-level health interventions, either implementing the intervention themselves or through a local NGO. In theory, the PDH would evaluate the proposed intervention according to the prefecture’s needs, but ultimately the INGOs and NGOs were in an influential position to shape community health ‘priorities’ in each prefecture due to their resources and capacity to act.

In part, the strategy of using local NGOs to implement CHW programmes was adopted as a means of building ‘local capacity’. As one prefecture-level stakeholder explained, ‘This is to prepare local NGOs in such a way that when the day comes that the international NGOs say goodbye to Guinea, the local NGOs will have the capacity to take over CHW activities’. NGOs reported that they provided training, supervision, provision of incentives and supplies to the CHWs for the implementation of community-level MNCH interventions, but it was not clear what mechanisms were in place to facilitate meaningful collaboration and coordination between the PDH and implementing NGOs prior to the Ebola outbreak.

The NCHP also highlighted the need for inter-sectorial collaboration in the coordination of the CHW activities, but again, did not stipulate how such collaboration would be operationalised. In practice, collaboration was most often reported between the PDH and prefecture-level representatives of the Departments of Decentralisation (DoD), primarily an administrative entity. In some prefectures, DoD representatives engaged in the study suggested that they monitored and supervised CHW programmes closely, but this was not directly observed. In other prefectures, DoD representatives did not have detailed knowledge about CHW activities and in Dubréka, for example, CHWs reported that they had no engagement with DoD representatives in relation to their community health activities.

Due to the multiple CHW programmes that were active in each prefecture and the evolving community health landscape, it was challenging to accurately map the stakeholders and MNCH programmes that were active prior to the Ebola outbreak. As far as possible, however, the box below summarises the key MNCH activities that were conducted as part of CHW programming in each of the study’s four focal prefectures immediately before the start of the outbreak (unless stated otherwise). In 2012, the iCCM component of CHW MNCH activities became part of UNICEF’s remit in Guinea, and in 2014, with technical support from the WHO, WAHO and the MoH, UNICEF started to develop plans to work with RTI, ChildFund and selected local NGOs for the implementation of iCCM. The iCCM remit included MNCH promotion activities; management of simple cases of malaria, pneumonia, diarrhoea and malnutrition in children under five; basic neonatal care; and making safe and timely referrals. iCCM was not implemented in any of the study prefectures until the later stages of the Ebola outbreak, and was then scaled up after the outbreak was declared over (as discussed in subsequent chapters).
Roles of other community health actors and their relationship to community health workers

The community health system in Guinea is characterised by multiple cadres of providers. Community members perceive that each cadre has their own specific role, and caregivers may interact with multiple providers during a single episode of childhood illness. The following narrative outlines the roles of health centre chiefs; traditional birth attendants; traditional healers; private clinics and private pharmacies; committees of health and hygiene, and village health committees.

**CHW programming in the study prefectures prior to Ebola**

**Dubréra**
In 2008, the PDH asked communities to select their own CHWs but reported to have been ‘At a standstill until 2012 when the donors came to support us’. In 2012, RTI contracted the local NGO CJMAD to start implementing CCM for malaria with 42 CHWs in hard-to-reach communities under the National Malaria Control Programme, with financing from the Presidential Malaria Initiative (PMI). CHWs were responsible for both prevention activities and the treatment of simple cases of malaria. There was also a Human African Trypanosomiasis (HAT) Control Programme that utilised CHWs in Dubréra. It was managed by the Government of Guinea and IRD and supported by the WHO and the Bill and Melinda Gates Foundation.

**Forécariah**
In 2012, RTI began working with the local NGO CJMAD to implement CCM for malaria as part of the National Malaria Control Programme, using a select group of 50 CHWs in hard-to-reach communities. According to a prefecture-level stakeholder, a select group of CHWs were trained by the MoH in 2012 to provide iCCM, but due to a lack of supervision these activities stopped. The HAT Control Programme also utilised CHWs in Forécariah.

**Macenta**
In early 2014, AACG were contracted by PLAN Guinea to implement CCM for malaria using 170 CHWs located in hard-to-reach communities in Macenta. These CHWs also conducted MNCH promotion and sensitisation activities. Jhpiego also worked with 463 CHWs in Macenta on a programme that aimed to educate women about family planning. Whilst they were mandated to distribute contraception at the community-level, the supply of contraceptives was problematic and the programme focused mainly on the education component.

**Kérouané**
Starting in 2012, PSI contracted the local NGO FUDD to implement a malaria CCM programme with 80 CHWs in hard-to-reach communities under the National Malaria Control Programme and with funding from the Global Fund. A small number of CHWs also reported to have provided treatment for simple diarrhoea although it was not clear which organisation provided training and supervision for this activity. It was also reported that Jhpiego worked with 120 CHWs to promote family planning and provide oral contraception at the community-level.

**Health centre chiefs**

CHWs were considered to be part of the health system and under the shared supervision of their local health centre and NGO implementing partner. It was usual for 10 CHWs to be attached to a health centre, and health centre chiefs were generally positive about and supporting of CHW activities. The main interface between a health centre chief and their CHWs was the monthly meeting held at the health centre. A small number of health centre chiefs also reported that they visited CHWs in their communities. Prior to the Ebola outbreak,
health centre chiefs were responsible for collecting CHW reports and supplying CHWs with rapid diagnostic tests (RDTs) and artemisinin-based combination therapy (ACT) for malaria. One health centre chief reported that he discussed with CHWs the challenges they faced, and worked with them to try and find solutions.

Traditional birth attendants

In 2010, the MoH redefined the role of traditional birth attendants (TBAs) in an effort to increase facility-based deliveries. TBAs were encouraged to take on a non-delivery role as ‘maternal health promoters’. In this capacity they were to act as the link between pregnant women and health facilities, referring women and encouraging attendance for antenatal care, delivery and family planning. As part of this new policy, many TBAs were placed under the supervision of the chief of their nearest health facility (health centre or post).

Despite their positioning as maternal health promoters, a number of TBAs engaged in this study confirmed that they frequently performed deliveries at health facilities, frequently without the immediate supervision of a trained healthcare worker. In some cases TBAs’ only supervision came from health workers who themselves had limited obstetric and neonatal training. Consequently, whilst many stakeholders suggested that the re-orientation of TBAs had increased facility-based deliveries, it was clear that not all facility-based deliveries equated to ‘delivery with a skilled birth attendant’. A small number of TBAs included this research were not attached to either a health centre or a health post, but rather worked independently in their communities.

Despite the change in formal policy, many TBAs continued to perform home deliveries, particularly TBAs who were either not attached to a health facility, or were attached to health facility located some distance from their own village. Whilst some TBAs reported that they did encourage women to attend ANC clinics at health facilities, many others did not actively encourage facility-based deliveries. Caregivers confirmed that home deliveries with a TBA were common, particularly in villages located at the outskirts of a health centre’s catchment area. However, even some communities located close to a health facility continued to see their TBA as the preferred obstetric care provider, because their TBA was well known locally, respected and trusted. As one TBA whose mother was also a TBA in Forécariah explained,

\[\text{Even if the health centre is close, some of the women will prefer to come to my mother because she has been a 'midwife' for a very long time. She helped some women to deliver, and those children who she helped to deliver have also given birth in her hands. Now it is their grandchildren who she is helping to deliver.}\]

A number of TBAs reported that the MoH had given them short courses on safe deliveries and recognition of obstetric complications requiring referral. This training, along with their strong sense of identity as birth attendants and the respect they enjoyed within their communities, made many TBAs reluctant to stop their work. Many also received small payments from the women they attended. Notably, one group of TBAs in Kêrouané, who claimed not to have received payments from their communities for home deliveries, reported being satisfied with their new role as ‘maternal health promoters’.

TBAs often expressed confidence in their ability to perform home deliveries safely and refer complicated deliveries to health facilities when necessary and in a timely manner. When pressed about the safe referral protocols they used, however, many were vague in their responses. Healthcare professionals suggested that TBAs were not well trained and lacked the skill and competency to assess obstetric complications and make timely referrals. As one healthcare work in Macenta explained,

\[\text{The issue is that TBAs are people who have not been to school. We previously trained them, and told them the cases of deliveries they were supposed to handle and those to transfer. But what happens is that they will hold on to the pregnant women for a long time, and before they send them to us, the women would have been very}\]

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tired and the like. This is why we’re now trying to withdraw the cases of delivery from the TBAs because they don’t want to obey our orders about the referral of pregnant women.

Community members acknowledged that, in line with the government policy, ‘rules’ had been put in place to prohibit home deliveries. Such rules were, however, rarely enforced. As one group of community leaders in Macenta highlighted, there was no real penalty attached to the ‘rule’ and it was seen to be ‘Just a way of putting fear in the women when there was no specific sum allocated for the penalty’. CHWs from other villages in Macenta reported there was a financial penalty for home deliveries, but that this did not apply to hard-to-reach communities who had limited access to health facilities.

If a woman delivers at home without coming to the health centre or health post she pays GNF 50,000 [approximately USD 5.50]. This fine is for women who live in the villages that have health post or centres, but deliver at home. As for those that are far from health centres or posts, the traditional midwives have their own place prepared for the circumstance or moment a woman is in labour, and they take her there for delivery.

Prefecture-level stakeholders clearly understood the rationale of prohibiting home deliveries, confirming, ‘We cannot improve community healthcare if community midwives continue working in the traditional way. All pregnant women are now advised to register and do their pregnancy follow up and delivery at their nearest health centre’. Stakeholders were pragmatic, however, about ongoing home deliveries supported by TBAs in difficult-to-access communities. Many CHWs reported that whilst they sensitised women on facility-based deliveries, they often felt conflicted as they knew it was difficult for women to follow the advice given because of the distance to the health facility, lack of transport and cost. As one CHW in Macenta explained,

Yes we do our work, we sensitise them to come to the health centre, but for those women from far villages it is not easy. You will sensitise them all along, but they will still wait until the last minute to declare their status or condition [i.e. labour], which can be very late in most cases considering the distance. So at the end of the day, they go to the traditional midwife for delivery.

Perceptions about the degree to which TBAs and CHWs collaborated were varied, although it was clear that each had a different role in terms of community-level healthcare. TBAs were widely regarded as the primary community-based service provider for pregnancy-related care, and CHWs were considered as treatment providers, particularly for malaria. In one village in Forécariah, it was reported that TBAs directed caregivers to take their sick children to the CHW for assessment and treatment. In a village in Macenta, if the TBA deemed a labouring woman unsuitable for home delivery, the CHW would be called to arrange her transport to the health centre. Other CHWs in both Macenta and Forécariah, however, had experienced ongoing conflicts with local TBAs over their practice of home deliveries, and advocated for TBAs to be trained on safe maternal care. During a focus group discussion in Macenta, CHWs agreed,

We have many misunderstandings between us... In fact, that is why we ask that they [TBAs] are given some form of training so that they can understand the risk involved in what they do. This will enable them, so even if they chose to continue their practice they might take precautionary measures. Maybe it will even make them encourage women to come to health centres. The problem between us CHWs and the midwives is regarding the pregnant women in the communities. Most of the time we encourage the women to go and do delivery in the health centre. But the midwives will tell them that if they go to the health centre for delivery they will have to spend this and that, and that their husbands do not have money and so on, but if they will accept to deliver in their hands, they will do it for a little minimal expenditure. So at this level, this is the problem we have with them.

Prior to Ebola, there was no formal government plan to address the persistently high rate of home deliveries conducted by TBAs despite the change in policy. Some NGOs, however, recognised the need to utilise TBAs in alternative roles, taking into account the unique position they held in communities.
Traditional healers

Communities, particularly in rural areas, strongly believed in ‘traditional’ practices and traditional healers played an integral role in the community-level health system. National- and prefecture-level stakeholders asserted that prior to the Ebola outbreak, traditional healers were often the first person caregivers would seek treatment from for sick children. It was also common for caregivers to seek the attention of traditional healers when formal health services had not provided curative care for their child. As a caregiver in Dubréka explained, ‘If first we go to the hospital and we find out that it is not a sickness that the hospital can treat, then we go to the traditional healer’.

Most caregivers explained that their choice of community healthcare provider was heavily influenced by the condition that affected their child. They perceived different providers to be suitable for different conditions. For malaria, for example, CHWs or facility-based healthcare workers were commonly considered the preferred provider (although many caregivers could not accurately identify the symptoms of malaria, particularly severe cases). Caregivers widely believed that certain symptoms or illnesses were best treated by traditional healers. These included not only spiritual-related illnesses (such as witchcraft sickness and attacks by the devil) but also conditions with clear biomedical causes including slippery green diarrhoea; convulsions; paralysis; stomach ache; polio; oral thrush; malnutrition; and bony injuries. The traditional healers who participated in the study also outlined certain conditions or childhood illnesses that fell within their remit and for which caregivers often sought treatment from them first. These included convulsions, fainting, severe cough and fast breathing, measles, yellow fever, chicken pox, external and internal haemorrhage, and serpent bites. As a caregiver in Kérouané explained,

| It depends on the sickness because the sicknesses are different. There are some sicknesses that you need to go to hospital for, and some are to be treated traditionally. If a child is having a stomach ache or if a child convulses, we will take him to the traditional healer for treatment. |

Another reason underlying the preferential use of traditional healers to treat child illness was their low cost in comparison to costs associated with treatment at health facilities. As one caregiver concluded, ‘What was pushing us to take our children to the traditional healer was the lack of money. We did not have the means to take them to hospital’. Traditional healers were more accessible to caregivers because they resided in close proximity, and in many communities, CHWs who may otherwise have been approached for treatment, did not have drugs reliably available or were also considered to be too expensive.

Certain structures to coordinate traditional healers had been established prior to the Ebola outbreak in Guinea. These included the Division of Traditional Medicine within the MoH, and Traditional Healers’ Associations (THA) within each prefecture. Whilst a large number of traditional healers were registered with their local THA (in Forécariah, for example, the THA had 514 registered members), many other traditional healers remained unregistered and practiced independently within their own villages. Even under the THA, regulation of registered traditional healers remained unclear. The president of one THA reported that they only registered ‘legitimate’ traditional healers after they had proved their competency through demonstration,

| We, as the association, will say, ‘Here is a patient, please help us to do the treatment’. So if he does not do the treatment we will now know that he is not part of us, but if he is able to treat the patient we will straight away understand that he is one of us. |

In the NCHP, the prominent role traditional healers played in community health was acknowledged and it highlighted the need to consider how traditional healers could be better integrated into the formal health system. Traditional healers and some CHWs reported that prior to Ebola, there was a working agreement between traditional healers and the formal health system. The collaboration involved traditional healers directing patients to seek care from a CHW or health facility. In the case that ‘modern’ medicine was not
possible or available, the patient would then be referred back to the traditional healer. As one traditional healer in Forécariah recalled,

*My experience before Ebola was that if someone were sick in this community they go to the health centre. But, if they were not treated or cured at the hospital, they would come to me and I would administer my treatment. In most case patients were healed and they survived.*

CHWs in Kérouané also confirmed that caregivers had often first sought care from traditional healers when their children were sick, whereas in Macenta and Dubréka, CHWs considered sick children to fall solely within their own remit, suggesting that there was no circumstance in which traditional healers should be approached. Some CHWs had a negative perception of traditional healers and reported that they had never worked in collaboration.

*Private clinics and private pharmacies*

Many villages, even those at the edges of a health centre’s catchment area, had a pharmacy or private clinic located nearby. Prefecture-level stakeholders confirmed that community members often used these services due both to their accessibility and their perceived quality of care, which was seen to be of a higher standard than that offered by public facilities. Some prefecture-level stakeholders suggested that private health services and drugs were expensive but acknowledged that since caregivers also had to pay for child health services at public health facilities, many would seek treatment from private providers and therefore reduce further out-of-pocket expenses associated with travel and transport. One stakeholder also reported that caregivers were more willing to purchase low-cost drugs at the market in preference to seeking care from health facilities, and would likely pay just GNF 14,000 (approximately USD 1.50) compared to GNF 50,00-70,000 (approximately USD 5.50-7.50) at the health centre for a ‘similar’ course of medication.

*Committees of Health and Hygiene, and Village Health Committees*

The NCHP (2012) outlined plans to establish a local system of governance for community health with the aim of building collaborative relationships between health centres, community leaders and community members in the planning, implementation and monitoring of all community health activities. To achieve this, the NCHP stipulated that a Committee of Health and Hygiene (CHH) would be established at each health centre and Village Health Committees (VHC) would be established at the community level. Neither the selection criteria nor the strategy for how the CHH or VHC would interact was clear from the NCHP. The policy included a broad remit for VHCs including the organisation of community meetings to discuss community health-related issues; supporting the activities of CHWs and amplifying their health promotion messaging; and mobilising local resources to support the health of their communities.

Across the different stakeholder groups engaged in the study, there was limited understanding of the role of HCCs and VHCs in community health, and there was a lack of distinction made between two entities. A number of prefecture-level stakeholders understood CHHs to play a role in ensuring community health needs were met (by both the CHWs and the health facility), while VHCs were thought to conduct health promotion activities similar to those performed by CHWs on issues including hygiene, malaria prevention and utilisation of health services (both community- and facility-based). One NGO representative in Kérouané described the VHC as ‘*The bridge between the health centre and the villagers. They are also responsible for maintaining and supervising the tidiness of the village through the village cleaning programme and monitoring its execution*.’ When asked directly, a number of CHWs described the CHH as an entity charged with ‘*Taking care of the health centre*’. One CHW in Forécariah explained,
Community members appeared to be unaware of CHHs or confused them with VHCs. In communities in Kérouané visited for this study, VHCs were not active. In communities in other prefectures, VHCs were comprised of village leaders, youth and students. Their activities included organising community cleaning; sensitisation on hygiene and the use of insecticide treated bed-net (ITNs); the promotion of facility-based deliveries and the use of health facilities or CHWs when people are sick; accompanying sick people to health facilities; and pooling community funds to finance emergency transport and treatment at health facilities. In one village in Macenta, the VHC had established a penalty system of GNF 20,000 (approximately USD 2) that they enforced for non-participation in community cleaning activities. Where VHCs were active, they reportedly worked ‘cordially’ with the CHWs, generally supporting their activities and amplifying their health promotion messages. Community leaders often reported that they assisted with arranging and financing transport to health facilities for pregnant women in labour or sick people outside the VHC structure.

Prefecture-level stakeholders expressed concern that VHCs were only active if financially motivated. It was noted that some VHCs had become demoralised after CHWs who received incentives became active in their communities. A representative of one local NGO confirmed that they gave VHCs GNF 160,000 (approximately USD 17) every three months to encourage their activities. He suggested that by paying VHCs, the local partner could foster a sense of authority.

VHCs are given motivation fees so it gives us [the NGO] some degree of authority to make them do the work. Sometimes it is really challenging because you will ask them to do something that they accept in your presence, but the moment you turn your back they abandon it. So we have to apply some pressure. But then that it is community development. We push them little by little.

1.2 Costing and financing

Prior to 2012, CHW programme funding was limited and sourced entirely from external donors. Donors funded specific community health activities according to their own organisational priorities. The Global Fund, for example, sponsored CCM for malaria only. It was common for INGOs to receive funds from different donors to run a single CHW programme. Funding structures were complex and often had to support significant ‘administrative overheads’ of both the managing INGO and the local implementing NGO.

The NCHP stated that accessibility to quality health services should be improved through financing mechanisms, but whilst it is stated that resources must come from several sources including the government, partners and communities, it did not outline a plan for government financing of CHW activities. The funding model did not change after the introduction of the NCHP in 2012 and the dependency on donor funds to finance CHW activities continued, resulting in ongoing uncertainties about the longer-term sustainability of interventions. This limited the capacity of the MoH to effectively and equitably bring community health services to national scale. Budgetary constraints also restricted the capacity of partners to undertake quality control activities, including, for example, rigorous supportive supervision.

1.3 Human resource management

The 2012 NCHP stipulated that CHWs should be ‘Chosen by the community with the support of the responsible health centre in the community’. The policy outlined key criteria on which the CHW should be selected. To
address previous concerns about nepotism, the NCHP highlighted the importance of avoiding CHW selection based on affinity with local authorities or health personnel. The criteria for CHW selection stipulated that the CHW should be a resident member of the community; able to read and write in French or Arabic; speak the local language; have good communication skills; have ‘good morals’; participate in alternative income-generating work; be married; and at least 18 years of age. According to implementing partners and community leaders engaged in this study, the selection of all CHWs in their constituencies had been done by the community. There was wide consensus that this process ensured trust between the CHW and their community. However, in contrast to the policy, many CHWs covered more than one village and therefore provided services to villages where they were not resident. It was reported that some CHWs covered up to eight villages that may be 10km apart (in one case quoted below a CHW covered 15 villages). CHWs commented that they felt more trusted in their own village than in the other villages they covered. CHWs who were residents in a community were also considered more likely to remain in the community as service providers, rather than health workers appointed from outside who often moved on to improved work conditions elsewhere.

Although the selection of CHWs after 2012 had generally been done in line the NCHP criteria, strict adherence to the guidelines was often not possible, and many CHWs appointed before 2012 did not meet these criteria. For example, many CHWs who had been appointed earlier were not literate. This raised concerns amongst national- prefecture-level stakeholders regarding the capacity of existing CHWs to be trained on more technical activities, including iCCM.

Across the study’s four focal prefectures, the majority of CHWs engaged were male, reflecting the gender composition of the CHW cadre nationally. Just two of the 36 CHWs who participated in the study were female. In terms of influencing care-seeking behaviours however, caregivers in Forécariah and Macenta indicated that CHW gender was less relevant than their perception of a CHW’s skill level and experience, even in relation to maternal health and family planning, which was traditionally considered ‘women’s business’. As one caregiver explained, ‘We will not be ashamed [to seek care from our CHW when we are pregnant] even if he’s a man, but he needs to be trained to do that. If he was trained, then we would go’. In Macenta, caregivers specifically expressed a desire for their CHW to be trained to provide basic obstetric care stating, ‘We would prefer the CHW to help us deliver our babies [instead of health workers] because he is so patient and willing to do the work. Whenever we come to him for any case he is always available to receive us, so if we could deliver with him we would feel relaxed’. Caregivers were also widely supportive of seeking family planning services from CHWs regardless of their gender. Despite this, many caregivers supported an increase in female CHWs, and in Dubreka one group of caregivers explicitly asked that more women be recruited and trained as CHWs.

The degree to which CHWs were engaged in community health activities differed by location, health centre and the partner they were affiliated to. In a small number of cases (as noted in Macenta), it was reported that NGOs selected their own CHWs independently of the PDH. In general, however, the accepted procedure was that in implementing a community health programme, an NGO would recruit a number of CHWs from the existing PDH pool of CHWs attached to the relevant health centres. Usually only a proportion of the total number of CHWs attached to each health centre that covered the programme’s target communities were selected. For example, for AACG’s CCM programme, just 10 of the 30 CHWs attached to each health centre were selected. Prefecture-level stakeholders reported this process had created tension between the CHWs who had been selected, and those who had not. As one PDH representative explained, ‘When partners come, they work with only a few CHWs and leave out numerous others. This cannot solve all the community health problems’. Often the same CHWs were repeatedly selected by NGOs for different community health interventions, and examples of an individual CHW working for up to four different NGOs at any one time were reported. An NGO representative in Macenta explained,
The ten CHWs we recruited and trained are doing their activities according to our plan of action, but are also working with another NGO that is also implementing family planning and promotion of breast feeding activities. And the WHO is using the same CHWs for surveillance at the community level, so the same CHWs are doing many activities at once in the community.

Similarly, a CHW in Kérouané concluded,

Each NGO that was coming was working with his own community health programme and his own time. Each NGO that was coming with a project would work with us up to the end of his project, and then when this NGO with whom we had been working was going, he would recommend us to the new NGO that was coming in. They told them [the new NGO] that for your work to succeed in the community, you need to work with these CHWs.

This resulted in gaps in coverage since some of the CHWs who were most regularly selected had to cover more than five villages. Due to their lack of transport and competing demands, CHWs primarily provided services in the communities in which they resided and were less likely to be available to provide services in villages on the peripheries of their coverage areas. It was reported that selection of the same CHWs by multiple NGOs to implement different tasks led to reduced reporting quality by some CHWs, and stakeholders raised concerns that the quality of the activities implemented may be compromised.

The NCHP did not include any specific recommendations about coverage or distribution of CHWs, but implementing partners reported that they prioritised the coverage of villages that had been identified as ‘hard-to-reach’, particularly villages located at the furthest edges of a health centre’s catchment area. Prefecture-level stakeholders were concerned that insufficient numbers of CHWs were trained, particularly in CCM to ensure adequate coverage of all ‘hard-to-reach’ communities. One CHW was often required to cover villages spread over a significant geographical area, consequently, services were not equitably provided to all communities, with communities located the greatest distance from a CHW’s own village being less likely to have service coverage. Also, because CHWs were expected to generate alternative means of income, many worked on their farms during the day, at some distance from their village. Whilst this did not greatly impact MNCH promotion activities, it was reported that it sometimes led to delays in the treatment or referral of sick children.

Training

As outlined above, the NCHP stated that a standard CHW training programme would be designed by the NDPCH and would be comprised of a module on basic health information education and communication, plus additional intervention-specific modules. This training package had not been developed or implemented prior to the Ebola outbreak. CHWs reported to have participated in different training activities, focused on different community health interventions, and delivered by the different NGOs that had recruited them. It was not uncommon for one CHW to recall having received separate trainings on MNCH health sensitisation, CCM for malaria, and family planning, each from a different organisation. Most of these trainings lasted between two and five days. CHWs most often reported having received refresher trainings for malaria CCM, although implementing partners also noted that brief refresher training may be given during supervision sessions by NGO staff and health centre chiefs. Many stakeholder groups forwarded the opinion that the training given to CHWs for CCM of malaria was insufficient, and CHWs identified that they found it difficult to manage the quantity and complexity of information that they were expected to learn over the course of the various brief trainings. As one CHW in Kérouané confirmed,
The level of our understanding is not the same as university graduates. When they deliver the training over five days we will only understand and remember the essential parts of the training, and the other parts we will not understand or remember at all.

In contrast to CCM or other forms of more technical training, PDH and MoH representatives suggested that CHWs did not require specific training to effectively deliver health promotion activities. As one prefecture-level stakeholder in Dubréka explained, ‘It does not require any special training to undertake the promotion of health, it is mostly sensitisation do the promotion of hygiene here. It is just a matter having common sense’. Many CHWs, however, requested increased training and on health promotion and communication skills.

Incentives

The 2012 NCHP acknowledged CHW motivation as an important factor influencing the success of community health programming. It recommended that certificates in ‘recognition of service’ be awarded as a form of motivation and stipulated that CHWs receive compensation for their activities from various sources: from the government in terms of payment for their participation in specific, time-limited community health projects (e.g. vaccination campaigns); from implementing partners through monthly payments, from the community through donations (e.g. of food) or in-kind; and from the profit margin CHWs would make if they sold drugs in the community. CHWs provided ACT (for the treatment of malaria) free of charge in their communities, but would theoretically charge community members for other medication (although they did not actually supply other medication, such as zinc or ORS, until during the Ebola outbreak).

CHWs in each prefecture included in the study received between GNF 60,000 and 80,000 (approximately USD 6.50 to 8.50) per month in travel allowance prior to Ebola, but CHWs reported that to complete their routine activities, they had to exceed the travel allowance they received. It was not scaled to the distance each CHW had to travel, so the financial deficit was greater for CHWs living at greater distances from the health centre to which they were affiliated, or needing to cover additional (often hard-to-reach) villages. In terms of non-financial incentives that could have been distributed during their monthly meetings, many CHWs had not been supplied with equipment such as rain gear, ID cards or food and reported this lack of support to be demoralising. The following narratives from two different CHWs in Kérioané were representative.

The difficulty that I face in providing or implementing the CHW activities in the community is the lack of mobility or the lack of transportation. I am covering 15 villages, and it is very difficult and I cannot cover them all. If people know about us, even in the far away villages that we are covering, then they will call because we do the treatment free of charge [CCM of malaria]. In this type of case, you are obliged to look for transport on your own and go to help the person, sometimes you can go and find the patient in very bad condition and with no money, so then you will be the one to pay that patient’s transportation to the health centre. So that is why we are asking the donors and the partners to help us to have mobility, to facilitate our movement in the communities. That will help us to move forward with our work.

We have four challenges that we face in implementing services in the communities. The first challenge is the lack of motivation fees. The second is the lack of mobility. They [the implementing NGO] gave us bicycles, but the places where we are to do the activities are in the hills and we have to climb those hills before reaching the villages or districts. Some districts are 12 miles distant. The third challenge is the lack of protection materials. We have given ourselves to serve our communities in season and out of season. We all know that this is the rainy season, they have not given us equipment against the rain. It is not good that we fall sick whilst trying to help others. We need rain boots and rain coats but up to now we have not got them. The fourth challenge is the non-repetitive training. If they give us one training it will take one year before having another. So these are the challenges we are facing.
CHWs also faced challenges in balancing their paid work with CHW activities that are not financially compensated. Some CHWs admitted that they were not always reliably available for community health duties because of other work commitments. Both health workers and NGO staff suggested that they were not able to hold CHWs to account for their community health responsibilities because they were not being paid. In Macenta, prefecture-level stakeholders reported that many CHWs had abandoned their community health activities in favour of paid work in the mining industry. National- and prefecture-level stakeholders remained concerned that CHW interventions were unsustainable without some form of increased incentive or remuneration.

1.4 Supply chain management

Supply chain management was a major weakness in Guinea’s health system prior to the Ebola outbreak. Stakeholders engaged in the study openly discussed their long-standing concerns about frequent drug shortages and stock-outs of essential MCH medicines to health facilities. The 2012 NCHP stated that health centres or health posts would be responsible for supplying CHWs with the necessary drugs to implement their activities but provided no details on the procurement or funding for drugs, nor how the drug supply chain would operate. Anti-malarial drugs and RDTs had been supplied to CHWs through the National Malaria Control Programme funded by various external donors and procured by Guinea’s Central Pharmacy. Logistics for the malaria supply chain were funded by USAID and the Global Fund to Fight AIDS, Tuberculosis and Malaria. Anti-malarials and RDTs were stored in the Central Drug Store (CDS) before being transported to the Regional Drug Store (RDS) and then onto health centres on a quarterly basis. Anti-malarials were supplied to CHWs by the health centre chief without cost and for free distribution in the communities. Both CHWs and health centre chiefs reported that anti-malarials had often been available prior to Ebola.

1.5 Service delivery and referral

Stakeholders reported that prior to Ebola, CHWs worked primarily as health promoters and acted as conduits between the community and health facilities, providing vaccinations, distributing ITNs and provided malaria testing, treatment and referral to health facilities as necessary. It was notable that NGO implementing partners were frequently unable to provide clear accounts of how certain MNCH activities were actually conducted by CHWs. For example, while NGO staff reported that CHWs followed up lactating mothers and newborns post-delivery, they were uncertain about when this was done, how often or the specific details of what activities were conducted.

Service delivery and referrals made by CHWs varied across prefectures and in some cases between communities within a single prefecture. As discussed above, CHWs reported multiple structural barriers to service provision (e.g. lack of transport, lack of motivation, limited drug supply), but patterns of care-seeking behaviour also determined how and when they were able to engage with sick children. Caregivers in Dubréka and Kérouané who lived in close proximity to a health facility perceived CHWs’ primary role was to provide vaccinations and promote MNCH, and did not frequently utilise CHWs for malaria case management. In contrast, communities that did not have easy access to health facilities reported that whilst CHWs provided vaccinations and distributed ITNs, caregivers most frequently interacted with CHWs when they believed their child had malaria. In these settings, CHWs were often considered the primary provider for conditions thought by the caregiver to be malaria (i.e. presentation of fever). Most caregivers were not familiar with the symptoms of severe malaria and some reported that they were more likely to seek care from traditional healers for the symptoms that may have indicated severe malaria (such as a reduced level of consciousness).
Such patterns of care seeking meant that CHWs did not always have the opportunity to refer patients with conditions besides simple malaria to the health facility.

In communities without a health centre, CHWs were more likely to report having played a role in referring sick children to health facilities prior Ebola, but CHWs could not always clearly articulate whether they were aware of the specific danger signs that warranted the immediate referral of a sick child. CHWs explained that they sometimes delayed referral due to the distance and logistical difficulties of accessing a health facility. CHWs also found pragmatic ways to work around issues of referral. In Dubréké, for example, caregivers in one community reported that CHWs would keep children with even severe conditions at the health post and would call healthcare workers (public or private) to travel to the village to provide healthcare. In another village in Dubréké, community leaders suggested that CHWs would refer sick children to private clinics, possibly since they were closer than public facilities. In Macenta, caregivers explained that they would bypass the CHW if the child was severely ill and transport them directly to the hospital 12km away, whereas in Forécariah and Kéréouané, CHWs suggested that patients would be given priority treatment at a health centre if they arrived with a referral slip from a CHW.

CHWs expressed frustration that whilst they were responsible for referring sick children and pregnant women to health facilities, there were no formal structures or mechanisms to facilitate such referrals and consequently distance to a health facility was a significant barrier to referral compliance in many communities. Frequently caregivers did not follow referral advice but sought care from alternative community-based providers. For example, CHWs in one community in Dubréké reported that the nearest health centre was 35 km away, and in Forécariah many communities live on islands and so are required to cross sea channels to access the nearest health facility. Other barriers highlighted by both caregivers and CHWs included poor road conditions, limited transport and the cost of transport. As discussed above, the cost charged by a health facility to treat children was also a widely reported barrier, and as one caregiver in Dubréké concluded, ‘If you don’t have money, you can’t go’. Caregivers in Kéréouané confirmed that if they were not able to pay upfront, health workers would not provide treatment. Some caregivers perceived this to be a lack of compassion on the side of the health workers and this generated animosity between communities and service providers. Previously negative experiences of poor quality services at health facilities also made some caregivers reluctant to seek care outside the community.

Many of the challenges associated with distance, the availability of transport and out-of-pocket expenses were consistent for both child and maternal healthcare, even though, according to MoH policy, essential obstetric services were supposed to be provided free of charge at the point of service delivery. As discussed above, women residing in villages at the outer reaches of a health centre’s catchment area tended to deliver at home assisted by a TBA, or in some cases and if their financial status allowed, at private clinics that were located closer than the public facility. In general, women who lived in closer proximity to a health facility utilised its maternal healthcare services and were more likely to give birth there, even if costs were incurred. As one caregiver in Kéréouané explained,

*If you go to the health centre, they will tell you that it is free, but it is not free because when you go they will give you a big prescription of the drugs that you need to pay for. And as long as you don’t pay for those drugs, they will not help you to deliver. Those women who have the means to go to hospital and pay for all the drugs to deliver, they will go there, but those who do not will deliver at home with the traditional midwife.*

CHWs adopted different strategies to overcome barriers to referral compliance. In Forécariah, CHWs accompanied caregivers and pregnant women to health facilities, and in Dubréké, some CHWs reported that they provided money to pay for transport or treatment costs. Having presented at a health facility, however, delays in service provision and the competency level of health workers could pose significant problems. One national-stakeholder suggested that even if a pregnant woman reached a health facility, health workers may be
slow to identify and then refer complicated deliveries to a higher-level facility, particularly if they feared their level of skill may be questioned. The stakeholder concluded,

*We put health facilities closer to beneficiaries, but often a lot of them do not even have personnel. Many women in labour have to walk several kilometers to the health centre and if it is a complicated delivery they will then have to be referred to the district health centre due to a lack of skilled health workers at the health centre. This delay in care results in the loss of either the mother or the baby or even both in some tragic cases. At the level of the Ministry of Health, there is need to recruit, train and deploy more midwives [and] qualified personnel at the health centre so that there can be less referrals, because sometimes women can be kept waiting for days.*

### 1.6 Communication and social mobilisation

In discussing their duties prior to Ebola, CHWs emphasised their responsibility to promote MNCH at the community level, and act as a link between the community and the health facility. As a CHW suggested in a focus group discussion in Kérouané,

*Our main role as community health workers before Ebola was sensitisation; sensitising the community to allow the pregnant women to identify themselves and go at the earlier stage of the pregnancy to the health centre for their antenatal clinic care. And sensitising the mothers to take their sick children to the health centre for treatment.*

Although MNCH promotion and sensitisation activities were frequently highlighted by stakeholders as key activities undertaken by CHWs, there were practical variations in the type and focus of activities and how they were conducted. For example, in Dubréka CHWs reported they went door-to-door to sensitisise pregnant women on maternal and neonatal health, whilst in Forécariah CHWs made ‘community announcements’ four times each week to share MNCH messages on breast feeding, the use of ITNs and hygiene. Other CHWs in Forécariah also suggested that they made home visits to lactating mothers and newborns, but provided little detail on the activities they conducted during these visits beyond promoting breast feeding. Just one CHW mentioned that during home visits he assessed new mothers and if he identified any post-natal danger signs (for example, post partum haemorrhage or pelvic pain) would refer the woman to the health centre. Many CHWs acknowledged that there were significant challenges in generating behaviour change related to MNCH. This was reflected in the low level of knowledge caregivers in some communities appeared to have about key MNCH practices and healthy behaviours. In Dubréka for example, caregivers suggested that *‘The only thing CHWs sensitisise us on about children is to say that during the raining season, we should avoid the children going into the rain and not allow them to remove their shoes’.*

### 1.7 Supervision and performance quality assurance

Although the 2012 NCHP highlighted the importance of CHW supervision in terms of motivation and quality control, it only made brief mention that their supervision was the primary responsibility of their health centre chief. Prior to the outbreak, the structure, frequency and quality of CHW supervision varied significantly between different programmes and implementing partners. Whilst CHWs in Dubréka reported having received no supervision whilst conducting a malnutrition programme under the auspices of one partner, other CHWs engaged in malaria CCM were supervised by health centre staff and implementing partners. One national-level stakeholder also reported that the PDH should provide quarterly supervision and the Regional Health Directorate should provide biannual supervision, although it was not clear what these supervisory sessions involved or whether they happened regularly.
The frequency of the supervision provided to CHWs recruited for malaria CCM varied by prefecture and many partners highlighted issues regarding resource limitations. In Kérouané, for example, CHWs reported that they were supervised once every three months by a designated FUDD supervisor, whilst in Forécariah, CHWs reported supervision up to three times each month by CIMAD. In Macenta, AACG appointed two supervisors to oversee 170 CHWs working across an area of approximately 120km, so it was not feasible to supervise every CHW each month. In all prefectures health centre chiefs provided supervision to CHWs at the monthly meetings convened at the health centre, and in some cases also provided supervision in the field. Whilst many CHWs reported that they regularly attended these meetings, some were required to travel long distances that incurred costs that exceeded their monthly incentive, and this threatened the sustainability of the meetings. National- and prefecture-level stakeholders suggested that health centre meetings in some prefectures did not happen regularly or on a monthly basis.

NGOs and health centre chiefs described different supervisory methods as part of community health programming, including for malaria CCM, but it was not clear if or how the quality of supervision was assessed. Some health centre chiefs reported that they focused on monitoring CHW drug supply, ensuring free antimalarials were not being sold and checking the accuracy of CHW reporting. Others suggested that they tried to provide more supportive supervision, using their reports to mentor CHWs, providing informal refresher trainings and discussing the challenges that CHWs reported they faced. NGO supervisors confirmed that they would observe CHWs ‘on-the-job’ and would provide constructive feedback. As one NGO representative in Dubréka explained,

When the community health worker plans his activities for the month, the supervisor will also will do his own plan of action with respect to that of the CHW. He will say, this day I will be with CHW X in village A, the next day with CHW Y in village B and so on. During these visits, the supervisor evaluates the CHW and if they meet a CHW in difficulty, they will give short training.

NGO supervisors also suggested that they monitored the validity of CHW reports and the quality of CHW activities by questioning caregivers with whom the CHW had come into contact. One supervisor explained,

The CHWs we go to supervise already have a form that they are supposed to fill in with the names of all the people who came to see them with their children and the treatment given over the period. Once this form is presented to us with the names, we target those parents who came to the CHWs with their children and we meet them in person to interrogate them on the words spoken by the CHWs when they went to get treatment. [We ask] what medications were given to them and we take down all of their responses. After finishing with the mothers, we come back to the CHWs to ask them the difficulties they are facing in rendering their services to the communities. Sometimes they’ll bring up challenges they face and on that note, we advise them on what they’re supposed to do. But when they say that they had no difficulties then it means that the work was perfectly done within that time. It can coincidentally happen that when we go to supervise a community health worker he will be with a mother who has come with her child for treatment. That is therefore an opportunity for us to sit down and observe how such a community health worker administers such treatment. We would congratulate him at the end of the day if he did it successfully, and that means that he has mastered the training he underwent. On the contrary, we give corrections and shape things well when we observe that he had made blunders in doing the treatment so that he would not repeat it the next time.

1.8 Monitoring and evaluation, and health information systems

To monitor CHW activities, each community health programme provided its own register and report form for the CHW to complete and submit monthly to their health centre chief. Often a single NGO implemented several different community programmes (sometimes under the supervision of different INGOs), and CHWs working on more than one programme (even if they were working for the same NGO) were therefore required
to fulfil multiple reporting requirements. In Kérouané, for example, CHWs working with one partner had to complete three separate registers and reports each month: the first for malaria CCM, the second for malnutrition and the third for family planning. Similarly, CHWs who worked for multiple implementing partners had different reporting requirements for each. As the representative from one local NGO implementing partner explained,

*It can be difficult for CHWs because we go with our malaria programme and explain the reports that they will understand at that moment, but as soon as we leave, another partner will come with his own programme that differs from ours and uses different report forms. If it were the same partner to train and supervise CHWs on all the activities, then that would be good.*

In completing their monthly report forms prior to submitting them to the health centre chief, CHWs were often assisted either by a supervisor from the affiliated NGO or a health worker at the facility to which they were attached. The health centre chief was then responsible for compiling the reports from all the CHWs into a single report for each community health programme, and sending this on to the implementing partner and PDH. CHWs confirmed that they usually submitted reports, but many related difficulties they faced in so doing, partly because of their low educational level or because they were confused by the multiple forms. Many national- and prefecture-level stakeholders confirmed that the completeness and accuracy of reporting had been a significant problem, even prior to Ebola.

Whilst stakeholders confirmed that the data collected was useful for programmatic decision-making, it was not clear if or how data were analysed systematically within programmes, and much reporting appeared to simply document activities conducted.

It was made clear in the 2012 NCHP that community health data was not integrated into the National Health Information System (NHIS) and that effective mechanisms for monitoring and evaluating the effectiveness of CHWs on MNCH outcomes had not been established. To address these weaknesses, the policy suggested that infrastructure for data management would be established at the community level. In each prefecture, data management would be the responsibility of the PDH and progress towards defined community health indicators would be undertaken every six months. As with many other components of the NCHP, these policy stipulations were not enacted prior to the Ebola outbreak. Implementing NGOs monitored their own programmatic outputs and although CHW reports were shared with the PDH, there was no evidence that the PDH or MoH monitored CHW activities. Although some INGOs reported that they had completed evaluations, these focused mainly on activities and outputs, rather than impact. None of the national- or prefecture-level stakeholders involved in this research were aware of any robust impact evaluations of CHW MNCH activities on maternal and child health outcomes in Guinea. There was a tendency to rely on general trends in maternal and child mortality data to draw conclusions about the effectiveness of CHW activities without considering the influence of potential confounders. As one prefecture stakeholder commented,

*The PDH probably gave you data collected [that suggests] the infant mortality rate of children who won’t celebrate their first year anniversary has reduced greatly compared to how it was over the years. That is used as a signal to show that the CHWs are actively implicated into these [MNCH-related] activities.*
During the Ebola outbreak we kept treating [children for malaria] but the number of patients reduced because the community members were afraid of Ebola and even of us.

But in this area, because we ourselves were children here, a small number of people kept coming to us because they trusted us more than going to the health centres. The malaria programme told us not to touch the patients and not to use the RDT. They also told us that whatever we do for patients, we should wear the protective hand gloves. Because of that advice we were protecting ourselves, so we stopped being afraid.

Our regular activities, sensitisation about maternal health and child health were not disturbed during Ebola because any time we would go into the field, we would first start with the sensitisation of our regular activities, and then we would add on the Ebola sensitisation.

It was not a really easy time and we fought a lot. At the beginning of Ebola many people were not coming to us and they were criticising us. But, when we started treating patients and they were recovering, it was now those patients that were helping us to sensitise the others by their testimonies. They told the community that they were afraid for nothing, there was no Ebola with the CHWs, so then they came to us and got treated.

CHW, Dubréka
2. Community health workers and delivery of MNCH services during Ebola

This chapter focuses on the MNCH services that CHWs provided during the Ebola outbreak. It discusses how MNCH activities were affected differently in each of the study’s focal prefectures, and the effect of the ‘no touch’ policy on the implementation of community-based activities. Again, the analysis is structured around the eight benchmarking components.

2.1 Coordination and policy

The government officially declared the Ebola outbreak in Guinea on the 23 March 2014. From then, implementing partners and the PDH recognised that CHWs were at high-risk of exposure to Ebola, a risk compounded by the limited training previously given on IPC measures and the lack of IPC equipment. The MoH did not call for a nationwide cessation of all CHW MNCH activities, but INGO and NGO partners that were implementing community-based MNCH activities reported that, initially, they made independent decisions regarding whether to continue or suspend CHW activities.

The course of action adopted varied by NGO, activity, the timing of the outbreak and the Ebola caseload in each prefecture (see box below). Both PLAN Guinea (working with AACG) and PSI (at that time working with FUDD) which were active in Macenta and the bordering prefecture of Kérouané, respectively, reported that they instructed their CHWs to stop all community-based treatment of malaria and instead refer patients to local health facilities. This guidance was issued in April 2014 when Ebola transmission was recorded in Macenta. Although MNCH promotion activities were not officially stopped, these NGOs did not place any emphasis on their continuation during the height of the outbreak. Dubréka and Forécariah did not record active Ebola transmission until August and September 2014, respectively. By then, RTI (working with CJMAD) in both prefectures, had stronger technical support and had benefited from time to prepare and adjust their activities. Consequently, RTI reported that during the outbreak they advised CHWs to continue CCM using a modified ‘no touch’ approach without the use of the RDT. They also confirmed that they encouraged their CHWs to continue MNCH promotion activities.

It was not until later in 2014 that partners in Guinea (including the MoH, UNICEF and WHO) developed standardised protocols for the Guinea context, integrating a modified ‘no touch’ approach into CHW’s existing community-based MNCH activities to ensure CHWs were protected from potential EVD exposure and infection. CHWs in each prefecture were trained in ‘no touch’ protocols for CCM of malaria in December 2014.

By early 2015 the intensity of Ebola transmission had eased in Guinea. Whilst the Ebola response was ongoing, partners began re-committing resources to strategies aimed at increasing accessibility and utilisation of essential MNCH services. In recognition of low health facility utilisation, community health services (preventive, curative and promotional) were considered an important component of these strategies. In February 2015, measles outbreaks affected the prefectures of Gaoaul and Koundara leading to 1,866 suspected cases being documented by May 2015 (UNICEF, 2015b). In response, the MoH with the support of UNICEF, implemented measles vaccination campaigns in affected prefectures and later more broadly across the country. National polio vaccination campaigns were also launched later in the year. In June 2015, the MoH, again supported by UNICEF, held a Maternal and Child Health Week across the country providing an expanded range of services including vaccinations of children under five for measles, tuberculosis, polio, diphtheria, tetanus, whooping cough, influenza, hepatitis B and yellow fever; malnutrition screening; distribution of vitamin A supplements; distribution mebendazole for deworming. Pregnant women were given tetanus vaccinations, were supplied with iron and folic acid and sensitised about malaria prevention (UNICEF, 2015b).
The expansion of community health services also included training CHWs to provide iCCM for malaria, pneumonia and diarrhoea and screening for malnutrition. UNICEF, the WHO and the USAID flagship Maternal and Child Health Integrated Programme (MCHIP) supported the MoH to develop standardised training, supervision and reporting protocols and tools for iCCM programming. From March 2015, UNICEF supported RTI, The Child Fund and AACG to train CHWs on iCCM with ‘no touch’ modifications in the context of Ebola, and provided them with a supply of ORS, amoxicillin, zinc, anti-malarials and paracetamol. The strategy was rolled out across three of the prefectures included in the study: in March in Dubréka and Forécariah with RTI (and CJMAD); and from September in Macenta with PLAN (and AACG). By the end of the Ebola outbreak, iCCM was being implemented by 2,330 CHWs across 27 prefectures. Specific iCCM actions are outlined in the box below (Ministère de la Santé, WHO, UNICEF, and MCHIP, no date).

**CHW activities related to iCCM**

**Malaria**
- Promotion of the use of ITNs
- Promotion of care seeking
- Distribution of ITNs
- Identification of danger signs
- Malaria diagnosis with RDTs
- Appropriate treatment with ACT
- Immediate referral of children with danger signs
- Follow-up after treatment

**Malnutrition**
- Promotion of exclusive breast feeding (< 6 months)
- Promotion of complementary feeding (> 6 months)
- Malnutrition screening with MUAC tape
- Screening for bilateral oedema
- Immediate referral of children with danger signs
- Follow-up after treatment

**Diarrhoea**
- Promotion of hand washing with soap
- Promotion of exclusive breast feeding (< 6 months)
- Promotion of increased liquids and continued feeding
- Promotion of sanitation at community level
- Identification of danger signs
- Appropriate treatment with ORS
- Appropriate treatment with zinc
- Immediate referral of children with danger signs

**Pneumonia**
- Promotion of hand washing with soap
- Promotion and provision of vaccination
- Promotion of care seeking
- Identification of danger signs
- Assessment of respiratory rate with timer
- Appropriate treatment with oral amoxicillin
- Immediate referral of children with danger signs
- Follow-up after treatment

The following box summarises key MNCH activities that were identified in the study’s four focal prefectures during Ebola.

**CHW MNCH services in the study prefecture during the Ebola outbreak**

**Dubréka**
From the beginning of the outbreak in Dubréka in August 2014 CHWs reported to have continued CCM for malaria, but at a significantly reduced level. The ‘no touch’ approach was adopted relatively early in the outbreak in Dubréka and CHWs stopped using RDTs for malaria diagnosis although they continued MNCH promotion and sensitisation activities. CHWs reported that they were supplied with sufficient anti-malarials by their respective health centres, and that they received supervision by CJMAD and continued to report activities throughout the outbreak. In March 2015 UNICEF provided technical and financial support to RTI (and CJMAD) to implement an iCCM programme for the management of simple malaria, diarrhoea and pneumonia with 40 of the existing CHWs. Although service utilisation remained low, CHWs reported that after the initial supply of amoxicillin, ORS, zinc and paracetamol (procured from UNICEF) had been consumed they were unable to
obtain supplies from their health centres and therefore referred children presenting with pneumonia or diarrhoea to the facility.

**Forécariah**

CHWs reported that their regular MNCH activities had been ‘almost paralysed’ due to community mistrust in their services after Ebola was reported in their prefecture in September 2014. CHWs were trained to continue CCM for malaria during the outbreak using the ‘no touch’ approach and without using RTDs. They confirmed that they had sufficient drug supply to provide CCM for malaria, particularly as the uptake of services was limited. CHWs reported that regular MNCH promotion activities were also significantly reduced due to community rejection, and the focus shifted towards sensitisation on Ebola prevention and control. Supervision was still provided by CJMAD and CHWs maintained their regular reporting of activities. As in Dubréka, UNICEF provided technical and financial support to RTI (with CJMAD) in Forécariah to implement an iCCM programme for the management of simple malaria, diarrhoea and pneumonia with a select group of 50 CHWs (April 2015). Although service utilisation remained low until the end of the outbreak, CHWs reported frequent shortages of iCCM drugs.

**Macenta**

Whilst AACG reported that they initially instructed CHWs to stop treatment of malaria and refer all patients, some CHWs confirmed that they had continued to provide community-based treatment for malaria, albeit at a reduced level. In December 2014, approximately eight months after the outbreak started in Macenta, AACG with financing from the Global Fund, trained CHWs on ‘treating malaria in the context of Ebola’ and encouraged CHWs to resume CCM of malaria adopting the ‘no touch’ approach. Some CHWs suggested that they stopped all treatment and only made referrals even after the training, primarily due to fear and a lack of confidence to engage with patients. AACG staff reported that they encouraged CHWs to continue regular MNCH sensitisation activities, but CHWs concluded that in practice, most of their sensitisation activities shifted from MNCH to Ebola IPC. Most supervision by AACG stopped for regular CHW MNCH activities, and focused instead on Ebola-related duties. Some CHWs suggested that their health centre chief continued to support and supervise their regular activities, but they gave varied accounts about whether or not they (the CHWs) continued to report regular activities themselves. In July 2015, after the end of Ebola transmission in Macenta, CHWs reported to have been trained by AACG on iCCM for malaria, diarrhoea and pneumonia.

**Kéréouané**

FUDD Guinea reported that they instructed CHWs working in their malaria programme to stop all treatment and instead refer patients to health facilities. This decision may have been influenced by the death of a CHW who contracted Ebola after caring for a patient in Gueckédou early in the outbreak. CHWs reported to have stopped treating malaria and some even stopped assessing patients for referral during the initial four months of the outbreak in their prefecture (from August 2014). Reasons for withdrawing from service provision included fear of being infected with Ebola due to the lack of protective equipment and training, and concerns that referrals may be resisted and could trigger violent rejection by community members. Several CHWs commented that even if they had offered services during Ebola, communities would not have utilised the treatment because of high levels of mistrust. The majority of CHWs also confirmed that they stopped MNCH promotion activities, although a small number said they ‘piggy-backed’ MNCH messages onto Ebola messaging. CHWs received formal training on ‘treating malaria in the context of Ebola’ approximately four to six months after the start of the outbreak in Kéréouané, but whilst some were motivated to return to their regular MNCH activities after training, others remained fearful and reluctant to provide services. FUDD and PSI’s supervision of CHWs reduced significantly in Kéréouané and due to health centre closures for various periods, health centre chiefs also stopped supervising CHWs. Reporting ceased for the first four to six months of the outbreak in this prefecture.
Roles of other community health actors

Traditional birth attendants

Although TBAs were not often included in formal Ebola response activities, community-based stakeholders emphasised that TBAs had played a significant role in providing care for pregnant women during the outbreak, monitoring their status and attending deliveries. TBAs engaged in the study reported that they performed an elevated number of home deliveries during the outbreak as many pregnant women avoided health facilities in Ebola-affected areas, and because some health facilities closed.

In Dubréka, Kérouané and Macenta, TBAs engaged in the study reported that whilst they received no formal training on safe delivery in the context of Ebola, their local CHWs and/or health workers did provide them with information on IPC and some basic IPC materials. In Forécariah, TBAs reported that they attended a short training given by the PDH and Ebola response partners on IPC, safe home deliveries and obstetric danger signs requiring referral. They were provided with gloves, but additional IPC materials that had been promised by the PDH and partners were never distributed.

TBAs affiliated with a health facility and under the supervision of health workers appeared to adopt more robust IPC measures than TBAs working independently in their communities. In Dubréka, a TBA that worked with the local health facility explained that her supervisory health worker had taught her how to enhance her practice such that instead of using a single pair of gloves during deliveries, she was to ‘triple glove’, and after each time she examined the patient, remove one pair of gloves, hand wash in chlorine, and replace the top layer of gloves. Another TBA in Macenta recalled that the facility to which she been attached was closed after the head of the health post died during the outbreak, yet determined to continue providing services from her home, she had purchased gloves in an effort to protect herself. It is likely that the majority of home-based deliveries were conducted without sufficient IPC materials, yet TBAs rarely expressed fear of infection, highlighting instead their trust that God would protect them.

In recognising the need to provide safer delivery services at the community level, the UNFPA implemented the Mano River Midwifery Response across all three Ebola-affected countries from late June 2015. According to a national stakeholder, the project in Guinea involved the recruitment and rapid training of 68 midwives, other health workers and in some cases previously untrained women. These ‘midwives’ were trained to perform safe deliveries in the context of Ebola and were strategically deployed to work in newly established ‘midwife-led’ units located in highly Ebola-affected border regions, including Macenta. The UNFPA also reported that they delivered 9,000 hygiene kits to pregnant women and ‘hundreds’ of ‘reproductive health kits’ to health facilities across Guinea. These included materials necessary for health workers to protect themselves from Ebola whilst attending a delivery.

A small number of TBAs engaged in the study had assumed Ebola-specific roles. One TBA in Forécariah, for example, was a member of her local Community Watch Committee (CWC, discussed further below) and assisted with the identification of sick community members, calling the ‘Ebola Team’ to collect them, and sensitising patients and families to accept referrals to the health facility. Notably, many women in this community sought obstetric care from the local private health centre managed by health workers who were known to ‘not take Ebola seriously’, rather than seek care from this TBA.

Traditional healers

Many community-based stakeholders suggested that already high levels of care seeking from traditional healers continued during the outbreak, and may have increased, largely due to the mistrust of formal health
services and health providers. Despite CHW sensitisation to utilise health facilities, community members frequently sought care from traditional healers instead, many of whom had limited understandings of Ebola and prevention and protection measures. As one CHW in Dubréka recalled,

*I remember receiving a patient during Ebola and I did the RDT test with precautions, but it was negative. I didn’t see any sign of malaria or other sickness, so I told the family to accept that together we transfer her to Ebola treatment centre. But all of them refused. So they took the old lady and carried her to the traditional healer. There she died. When she died they didn’t accept the Red Cross team to do the swab, so they [the family] buried her.* After the burial, even her daughter who was at the ministry, they all died.

Traditional healers had a high-risk profile, and it is likely that a significant number contracted the disease, although there are no formal statistics enumerating how many traditional healers were suspected or confirmed cases of Ebola or died from infection. The MoH concluded that traditional healers may have contributed to the spread of Ebola in Guinea, and the government eventually issued an official order prohibiting traditional healers from practicing during Ebola.

According to traditional healers, it was not until ‘Ebola was almost finished’ that the government and Ebola response partners started to train traditional healers and actively include them in the Ebola response. Yet, even after active attempts to engage traditional healers in the Ebola response, a number of stakeholders across the study stated that some traditional healers remained reluctant to cease their regular activities or adhere to Ebola IPC guidelines due to the lack of compensation they received from the government or partners for doing so. As a representative from the Traditional Healer Association in Forécariah stated, ‘I did not want to work with the Ebola response considering how much I made per day as a traditional healer, and with the Ebola response I was working without receiving anything as pay’. The same representative reported that after UNICEF agreed to provide him with a motorbike and fuel, he was motivated to continue to work with the Ebola response. In Forécariah, 514 traditional healers accepted training on Ebola IPC and adopted the ‘no touch and refer’ approach, but 200 traditional healers resisted training and the adoption of IPC measures. A representative from the Traditional Healer Association explained that these traditional healers resisted in protest against the perceived mishandling of Ebola funds that had been received by the Traditional Healers Association and should have been distributed to traditional healers across the prefecture in compensation for their engagement in training and adherence to Ebola IPC. It was reported that three of the traditional healers in Forécariah who had been resistant contracted Ebola and died. The leaders of the Traditional Healer Association expressed frustration that traditional healers had not been trained or received enhanced sensitisation on Ebola earlier in the outbreak. As one traditional healer in Macenta concluded,

*When Ebola started we really saw difficulties because we were not aware of which type of sickness it was. That is what killed many of our friends. Many of them died because of the lack of good communication. It was later on that we had the information that Ebola is a sickness that can kill people. If one person is infected in a family, and if that family is not careful, they will all be infected. So based on that information we started keeping our distance. Along the way, we received a call that all the traditional healers should come for the training. So it was the training that prevented many more of our friends being killed.*

Various NGOs ran trainings that sought to educate traditional healers on Ebola warning signs, encourage them to adopt the ‘no touch’ policy, refer all sick people directly to their local CHW and call the Ebola Team if they knew of sick people or deaths in their community. Existing THA structures in each prefecture were useful in organising and engaging traditional healers, many of whom may have avoided identification if partners attempted to enter communities themselves. In Macenta, for example, *Médecins Sans Frontières* (MSF)

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5 As part of the Safe Burial Protocol adopted during the Ebola outbreak in all three Ebola-affected countries, an oral swab was collected from all deceased patients. The swabs were usually collected by a trained health worker or a member of the safe burial team and were laboratory tested to confirm or exclude Ebola infection.
requested the THA to identify 35 traditional healers from each sub-prefecture for training. These traditional healers were then supervised to cascade their sensitisation to other traditional healers working in the same sub-prefecture. As a THA representative in Macenta explained,

**MSF trained us on how to identify the symptoms of Ebola and to know that a person has Ebola. They taught us on how to avoid Ebola. Those 35 of us who were trained went back to our communities to sensitise and tell our traditional healer friends that this is how to know the cases of Ebola and if you happened to identify one case, just avoid [touching them] and refer or encourage the person to go to Ebola Centre.**

Stakeholders expressed mixed opinions about the effectiveness of the late engagement and sensitisation of traditional healers, and the government’s official decree prohibiting their practice. In Forécariah, for example, representatives from the Traditional Healer Association reported that their door-to-door sensitisation campaigns led to the identification of 630 sick people who were referred to health facilities, 39 of whom were Ebola positive. Traditional healers in Forécariah confirmed that they had stopped providing community-based traditional treatment and joined their Community Watch Committee. Caregivers in these communities also denied having sought care from traditional healers during the outbreak, and as one community leader concluded, ‘I gave money to my brother who is a traditional healer to treat me, but he refused to treat me as nobody was allowed to practice any such activity’. According to another representative from the Traditional Healer Association however, some traditional healers did continue to practice in Forécariah, driven primarily by financial incentives. In Dubréka community members strongly denied using traditional healers after the official decree had been issued. In contrast, caregivers in Kérouané reported to have continued seeking care from their traditional healer during the outbreak. Similarly, in Macenta, community leaders also suggested that they continued to take their sick to traditional healers as the first source of care, and only presented them to a CHW if the traditional healer’s treatment was ineffective. In one village in Macenta that had over 50 deaths from Ebola, the traditional healer continued to claim that his services were effective even for the treatment of Ebola. He concluded,

**During Ebola my contribution to the health of the community was still the same because I didn’t stop my treatment. During Ebola there were some people that got infected by Ebola and I was able to treat them and they got healed. Some were already bleeding, and those ones were taken to Ebola centre for treatment. But for those that were infected and didn’t delay to come to me, I healed them.**

### 2.2 Costing and financing

Data about the costing and financing of CHW MNCH activities during the Ebola outbreak was not made available during the study.

### 2.3 Human resource management

**Training**

There was a rapid expansion of community-based workers during the outbreak. As discussed in the following chapter, most of these workers were recruited for Ebola-related activities, but from March 2015, ‘new’ CHWs were trained alongside ‘old’ CHWs to provide iCCM for malaria, pneumonia and diarrhoea across 27 prefectures, including the study prefectures of Dubréka and Forécariah (with RTI supporting CJMAD) and in Macenta (with PLAN supporting AAGC).

As outlined above, CHWs who previously provided CCM for malaria received two days of training on the revised ‘no touch’ protocol for malaria CCM in the context of Ebola in December 2014. The training was given
by PDHs and NGO partners, with support from UNICEF and/or the WHO. Many CHWs therefore experienced a long period between when the outbreak was declared in their prefecture to when they received formal training on how to safely continue their regular activities. In Macenta, the December training came eight months after the first Ebola case was reported in the prefecture (in April).

In discussions about the protocol for malaria CCM, it was clear that it had been interpreted in various ways by different stakeholders. Whilst most agreed that CHWs were trained to stop using RDTs and to assess and provide presumptive treatment without touching patients, a small number of national- and prefecture-level stakeholders reported that CHWs were trained to simply refer all patients without treatment. The most significant discrepancies identified were related to the criteria for CHWs to either make an immediate referral of a sick patient or provide presumptive community-based treatment for malaria (and only to later refer the patient if treatment failed). National-level representatives from one implementing NGO suggested that CHWs were trained to treat children presumptively for 24 hours if they had a fever but no Ebola danger signs (including, for example, contact with other sick people or recent deaths in the family). If the fever persisted after 24 hours, they were instructed to refer the patient. NGO representatives in Forécariah reported that CHWs were also trained to monitor a patient’s temperature every 12 hours and if the recorded temperature exceeded 38 degrees celsius, to immediately refer them. In contrast, another national-level stakeholder suggested that CHWs were to treat all fever cases ‘automatically’ and not to refer patients unless no improvement was observed 72 hours later. None of the stakeholders included in this research raised the issue of isolating sick individuals during presumptive community-based treatment with ACT.

National-level stakeholders suggested that training CHWs during the outbreak gave them confidence to continue regular MNCH activities, even in the high risk Ebola context. Yet, CHWs themselves expressed different levels of understanding and confidence about applying the adapted CCM and, later, iCCM protocols. Differences in perceptions were clear even between CHWs working in the same prefecture and with the same implementing partner. During the study, when asked to discuss the modified protocol for malaria CCM, CHWs in Macenta and Kérouané appeared to be the least clear. In Macenta, one CHW reported, ‘We were taught on the different signs between Ebola and simple malaria. So I could look at any child that came and I would tell whether he had Ebola or simple malaria. If there were signs of Ebola, I would straight away refer him to the health centre’. Other CHWs in Macenta reported, however, that despite training they were not confident to provide any treatment during the outbreak, ‘The training helped us protect ourselves, but did not make us capable to provide care without being contaminated’. In Kérouané, some CHWs presumptively treated for malaria and referred if there was no improvement after 48 hours, whilst others reported that ‘Symptoms of malaria and those of Ebola were similar so we referred all patients and did not treat any’. CHWs in Forécariah and Dubréka were generally more confident in their knowledge and application of the adapted ‘no touch’ protocol for CCM and iCCM. In Dubréka, CHWs stated that ‘Whenever a patient came, we just asked them to wash their hands before entering. Once they entered we would wear gloves, take the drugs and give them to the patient without doing any test’. In Forécariah CHWs reported checking for Ebola triggers before treating fevers presumptively as malaria, and confirmed that they referred any child whose condition did not improve after two days. As one CHW in Forécariah explained,

*We would ask him, ‘Are you feeling a headache? Are you feeling pains around your joints? Is your body warm? Are you feeling cold? Are you vomiting? Are you feeling stomach ache? Is your stomach running?’ In all these questions that we asked him, if he confirmed about three or four, we would say, ‘Please, we don’t have your treatment here’ and then we would refer the case, but by advising and sensitising him first so that he would not run away or refuse to go.*

One national-level stakeholder suggested that because CHWs had a lack of complex clinical knowledge, they were more likely to adhere to the ‘basic rules’ of referral. They claimed that this made CHWs ‘safer practitioners’ during the outbreak compared to some health workers who may have been more likely to delay
referral whilst attempting to differentially diagnose Ebola and non-Ebola cases. From the accounts of CHWs, however, it is clear that many attempted to differentiate between Ebola and non-Ebola cases, but that they did not have the required skills or competency to do so after just two days of training. Also, community members did not always disclose essential information to the CHW to enable them to make an accurate diagnosis. One CHW in Macenta explained how they ‘missed’ a case of Ebola,

One child came with his mother claiming he had malaria. They denied anyone else was sick in the family. I gave him the normal dose of anti-malarials, but I didn’t touch him. Upon returning home, I learned that there were cases of Ebola in their family. Eventually the child died and his mother died also.

Incentives

Whilst many CHWs continued to receive their standard monthly travel reimbursement during the Ebola outbreak, no additional payments were made for continuing their regular MNCH activities or providing iCCM despite the high risk, hostile work environment and significant responsibility involved. National- and prefecture-level stakeholders in Dubréka and Forécariah suggested that CHWs were motivated to provide regular MNCH services because of the training they received, the supervision and the provision of essential IPC materials, including gloves, soaps, chlorine and hand sanitisers. Reports from CHWs in these prefectures and in Kérouané and Macenta reflected such opinions, but in addition, CHWs who had been active in their regular roles during the outbreak were clearly motivated by a commitment to their communities rather than by the prospect of significant financial gain. In contrast, a number of other national- and prefecture-level stakeholders, concluded that many CHWs had in fact neglected or resigned from their regular duties in favour of conducting highly paid Ebola-related activities. As one NGO representative explained,

Because we paid a motivation fee of GNF 25,000 [approximately USD 2.70] compared to the GNF 400,000 [approximately USD 43.40] paid by other organisations engaged in the Ebola response, some of our CHWs abandoned our institution and went in with those NGOs that were paying hundreds of thousands.

2.4 Supply chain management

As discussed above, the majority of CHWs who did continue to provide community-based malaria treatment during the outbreak, reported that they had a sufficient supply of ACTs throughout and, as before, continued to provide ACTs free of charge to children in their communities. It was notable, however, that CHWs and other stakeholders widely reported a significant decline in the rate of utilisation of CHW services by caregivers across all prefectures, and therefore drug demand was comparatively low during the Ebola outbreak. In their support of iCCM programming in 2015, UNICEF only procured and distributed the first supply of ACT, amoxicillin, ORS, zinc and paracetamol to CHWs in the implementing prefectures including Dubréka, Forécariah and Macenta. These drugs were then sold by CHWs to caregivers with a profit margin of approximately GNF 1000 (USD 0.11). CHWs were to keep the profit as a small incentive and in theory, use the bulk of the profits to purchase their next supply of drugs from their health centre’s stocks. After the initial supply of drugs had been consumed (or expired) CHWs reported wide-spread difficulties in re-stocking. The lack of iCCM medicines led to children being referred to a facility when they could have been treated at the community level, a referral that many caregivers were often reluctant to comply with in the context of Ebola (discussed further below).

In terms of IPC materials, CHWs in Dubréka and Forécariah and one CHW in Macenta who continued to provide MNCH services during the outbreak, concluded that they had sufficient supplies of gloves, but in Dubréka shortages of soap and chlorine were reported. Other CHWs in Macenta suggested that they may have felt safer had they been provided with more protective gear, such as face masks. In Kérouané, however, CHWs
perceived that the use of personal protective equipment including gloves deepened community mistrust and had the knock-on effect that CHWs were discouraged from offering services. As one explained,

We were not willing to go and see our patients because if you wore gloves to touch them they would say we want to give them a sickness and if this was not true then why did we not touch them with our bare hands? So the patients were afraid to come to us as they thought we are sharing Ebola.

2.5 Service delivery and referral

CHWs in Macenta, a prefecture that was affected by Ebola earlier during the outbreak, and Kérouané, which bordered Macenta, provided numerous explanations about why they did not offer MNCH services, particularly CCM, at least during the initial four months of the outbreak in their region. The most commonly cited reasons included: instruction to stop services from the supporting NGO; lack of training; limited protective equipment; limited or no supervision (health centre closure contributed to this in Kérouané); fear of contracting Ebola; fear of community hostility; and community rejection of services. As discussed, some CHWs avoided providing services or referrals, even after being trained, and suggested that their lack of confidence in the training and a persistent level of fear caused this behaviour. In Forécaria and Dubréka, prefectures that were directly affected by Ebola later in the outbreak (like Kérouané), CCM programming under RTI and CJMAD continued to a greater or lesser degree with the later addition of iCCM services, and CHWs both treated and referred children to health facilities. CHWs in Dubréka stated that assuming additional Ebola-related responsibilities did not interfere with their regular MNCH activities, and as one explained, ‘It was not affecting our activities at all because we could receive patients in the morning and at 5pm we would go out to do the contact tracing’. Both prefecture-level stakeholders and CHWs expressed concern, however, about the quality of care that they were able to provide using the ‘no touch’ approach to care for children at the community level. As one PDH representative in Dubréka concluded,

The ‘no touch’ approach truly affected the quality of care CHWs were able to provide. They were doing treatment only based on what the patient said. The CHWs only used the contactless thermometer to get the temperature and quickly refer. You cannot do treatment of malaria without testing to check that is it malaria. That ‘no touch’ policy really affected the healthcare provided in the communities.

Care seeking

As discussed above, care seeking from CHWs reduced during the outbreak, the ‘no touch’ approach negatively impacted caregivers’ perceptions of CHWs and the quality of their services, and rumours that reinforced the reluctance to seek care were perpetuated, including that CHWs’ anti-malarial drugs contained poison or that CHWs were being paid to refer patients to the health facilities to be killed.

Instead of using CHWs, many caregivers therefore sought care from alternative service providers in the community, often those who claimed that Ebola was ‘not real’. In Macenta, community leaders reported using traditional healers, whilst in Dubréka, caregivers confirmed that they would treat children with homemade herbal remedies, and in Forécaria, care was more readily sought from private clinics. As one caregiver explained,

At the beginning of Ebola we, the women, were really afraid of our CHW because we thought that they [the government] gave him the poison of Ebola to put in the water well or into our tap water, to infect us with the Ebola virus. So we were afraid and at that time we called him all types of names. So instead [of seeking care from the CHW] we took our children to Pamalap hospital [a private clinic] because in Pamalap many people,
even the health workers, did not believe that Ebola was real. So it was there that we were taking our children for treatment.

Although CHW service utilisation reduced, caregivers in all prefectures confirmed that they were still more likely to seek care from CHWs than from health facilities that they considered particularly dangerous during the outbreak. This was one of the main factors in rolling out iCCM later in the outbreak. Community leaders in Dubréka suggested that since their CHW had been working amongst them for so long, the community-CHW relationship was more resilient than their relationship with less known facility-based health workers. Also in Macenta, community leaders emphasised that they were primarily fearful of outsiders but continued to seek care from their CHW during the outbreak. They confirmed that the provision of effective treatment by CHWs helped to dispel rumours and re-build community trust in CHWs. As one CHW in Dubréka concluded,

It was not really easy, but we fought a lot because at the beginning of Ebola many people were not coming and they were criticising us, but when we started treating patients and they were getting well, it was now those patients that were helping us to sensitize the others by their testimonies, telling them that you are just afraid for nothing, there is no Ebola with them, we went and got treatment and now we are healthy.

Referral compliance

Across all prefectures, community-level stakeholders reported that caregivers resisted referrals that CHWs made for them to attend health facilities. Caregivers discussed their fear of contracting Ebola from other patients at the health facilities, or of being intentionally infected or killed by health workers. Community leaders in Dubréka recalled one powerful rumour that circulated, suggesting that health workers were injecting patients with a lethal poison. In Dubréka and Kérouané, health centres were renamed ‘ebola centres’ by community members, and many caregivers believed that health centres were closed during the outbreak. Caregivers confirmed that their experiences of staff absenteeism, slow and poor quality services, drug stockouts, and perceptions that the heightened IPC measures that were adopted by health workers were ‘uncaring’, all contributed to their decision to avoid health centres during the outbreak.

To encourage the utilisation of health facility services and referral compliance, representatives from one health centre in Forécariah reported that they had provided free healthcare in an effort to reassure communities that the centre and its treatment were not contaminated with Ebola. This had serious financial ramifications, however, as the centre relied on the payment of services to operate and health worker salaries remained unpaid for four months.

In many cases, observing community members receiving treatment and returning to good health contributed to the re-building of trust in health workers and encouraged the timely utilisation of health facilities. Several national- and prefecture-level stakeholders suggested that because of their constant presence and ongoing sensitisation efforts during the outbreak, CHWs had played an integral role in re-establishing mutual trust between communities and health facilities. While one PDH representative in Dubréka acknowledged that during the height of the outbreak many community members avoided CHWs, he highlighted the complexity of the Ebola context concluding that,

The community-based treatment of malaria helped to establish confidence between the communities and the health workers. At first, everyone was afraid to go to the hospital because if you went to the hospital and they sent you somewhere else [i.e. an Ebola treatment centre], you may never come back. That was the ideology of the people. People were more willing to come to community health workers and try to get the drugs from them instead of going to the health centres.
2.6 Communication and social mobilisation

The delivery of MNCH promotion activities during Ebola followed a similar pattern to CCM. In Dubréka and Forécariah, CHWs and their respective implementing NGOs reported that they continued MNCH sensitisation activities during the outbreak including malaria prevention messaging, encouraging pregnant women to attend ANC clinics, deliver at health facilities and do exclusive breast feeding. As one CHW in Dubréka concluded ‘Our regular activities on the sensitisation of maternal health and child health was not disturbed at all, because any time we go to the field, we start first the sensitisation on our malaria, pneumonia and diarrhoea activities, then we add on the Ebola sensitisation’. In Macenta, however, communication and social mobilisation activities largely shifted from MNCH to Ebola IPC, and in Kérouané most CHWs reported to have stopped MNCH promotion activities altogether.

2.7 Supervision and performance quality assurance

Overall, supervision for regular MNCH activities by both implementing NGOs and health centre chiefs was significantly reduced during at least the first phase of Ebola. A number of contributing factors were identified including NGO policies restricting staff movement for safety reasons, restrictions on movement implemented at the prefecture-level, and the inability of NGO workers to enter many communities due to hostility and community resistance. The closure of health centres due to quarantine, sickness or the deaths of health workers (as in Kérouané), and the preoccupation of health centre chiefs with Ebola-related activities also led to reduced CHW supervision for regular MNCH activities.

There were, however, marked variations at prefecture and sub-prefecture levels, and where supervision continued, CHW reporting was also likely to continue. In Dubréka and Forécariah, it was notable that CHWs working with RTI and CJMAD reported that after an initial brief period of reduced supervision, it had then continued uninterrupted throughout the rest of the outbreak. PLAN Guinea confirmed that they had temporarily closed their prefecture-level office in Macenta during the height of the outbreak and this meant that they did not provide supervisory oversight to AACG or the CHWs during this time, although AACG continued to supervise their CHWs, but the focus shifted towards Ebola-related activities. In Kérouané, supervision from FUDD and PSI for MNCH activities significantly reduced.

When iCCM programming was rolled-out across select prefectures later in the outbreak, the programme used the supervision and reporting systems that had been in place prior to Ebola for malaria CCM. In Dubréka and Forécariah, iCCM was introduced whilst new Ebola cases were still being reported, and a national RTI representative confirmed that they had expanded the number of prefecture-level supervisory staff to ensure their CHWs were adequately supported to deliver an increased workload in high-risk environments.

2.8 Monitoring and evaluation, and health information systems

In Dubréka, Forécariah and Macenta, the three study prefectures that began implementing iCCM during the outbreak, CHWs were provided with standard reference booklets containing algorithms for the assessment and management of malaria, diarrhoea, pneumonia and malnutrition (including alternatives for the context of Ebola). Standard iCCM registers were introduced and CHWs expected to record the details of every patient they assessed and managed. They also completed monthly iCCM report forms that were submitted to the health centre chief to be checked and collated before being sent on to the PDH and implementing partner. NGO partners in Dubréka confirmed that they had provided their CHWs with cell phones to facilitate a mobile reporting system that captured CHW activities each week. The mobile data sent by CHWs was uploaded to a
central server and used by the NGO partner to ascertain which CHWs were active and to verify the monthly CHW reports.

With the roll-out of iCCM, NGO partners and CHWs confirmed that accurate iCCM reporting on top of their existing documentation requirements was challenging, particularly for the CHWs who had lower levels of education. Problems relating to the accuracy and quality of reporting were seen to improve over time with increased supervisory support, and in Dubréka NGO supervisors confirmed that they reviewed CHW registers during monthly or supervisory meetings as a way of assessing quality of care. Other stakeholders expressed a greater focus on validating the CHWs’ reports by cross-checking CHWs’ reported activities with community members. This review of data helped to identify CHWs that either needed additional support to improve their quality of care, or target the ones that were relatively inactive (yet potentially benefiting from remuneration). As a representative from one implementing partner Dubréka concluded, data was ‘Very useful for the activities because it gave us the overview of the situation: cases brought for treatment, cases referred, and cases treated’ and another stated, ‘The data helped us know which CHW was working and which one was not working’. As with other components of CHW programming, however, it was unclear if and how iCCM data was being systematically analysed to inform programmatic decisions and it did not appear to be integrated into the national information system.
During the Ebola outbreak most of us CHWs were abused. Some were hit and others had stones thrown at them by community members because they were thinking that we were intentionally spreading Ebola. Whenever we attempted to conduct community sensitisation activities we were attacked.

During this period of denial, the Ebola death rate was increasing every day. This eventually led the community to change their minds and they finally understood the messages we were trying to deliver to them. They came to understand that we were not there to do them harm but to help them. So they started adopting the behaviours that we were advising them on. These included, most importantly, washing of hands, safe burial practices and avoiding touching the corpses of Ebola victims. In the end they took this message and joined hands with us to fight it.

CHW, Macenta

During the early time of the outbreak, we thought Ebola was not real, that it had just been invented.

We kept our distance from our CHW because of fear driven by the suspicion that during his training, our CHW might have been given some chemicals or drugs that he may put in our well water or any water source with the goal of infecting the entire population in the village with Ebola.

After some time we came to understanding that our CHW was our son, his mother and father are all here, he was born here and he grew up here so if he meant any evil for us, then himself and his family would be amongst the victims. So based on this analysis, we decided to come back to him and work together with him to stop the spread of Ebola.

Our CHW was really working hard, I can say that. He was part of the Village Watch Committee and was going door to door to sensitise the community on Ebola prevention. CHWs also set-up check points to screen people entering the village by taking their temperature using the contactless thermometer, and they would ensure people washed their hands. They also provided treatment for malaria. I can say the CHW did really good work.

Community leader, Forecariah
3. Community health workers and Ebola-related work

This chapter focuses on the Ebola-related work that CHWs were engaged in during the outbreak. For ease of comparison with the pre-Ebola and post-Ebola work conducted by CHWs, this chapter is also structured around the eight benchmarking components.

3.1 Coordination and policy

Across the three most affected countries, both the national and international response to Ebola was slow. After the first identified cases of Ebola in Guinea in December 2013, technical, institutional and financial weaknesses resulted in delayed confirmation, declaration and coordination of an effective response (Diakité 2016). The initial phase of the outbreak was centrally organised by the Division of Disease Prevention within the MoH, but they were under-resourced and ill equipped to deal with the magnitude of the outbreak. In each prefecture the response was co-ordinated by the PDH supported by local and international NGOs. The limited engagement of non-technical stakeholders including local political structures was retrospectively considered by some national and prefecture-level stakeholders to be an oversight in the initial response effort. Governmental challenges in exercising decisive leadership created a vacuum in which NGOs began to implement their own Ebola response activities in affected prefectures. This action was not always coordinated through the PDH, local political structures or community leaders, which was problematic. As one government representative at the prefecture level in Forécariah explained,

We faced problems because the first time that the partners came to the field they did not even contact us and they went straight to the field. When they did this they learnt a lesson. Some were beaten and their cars were burned and many other disastrous things. I want to give you one example. Partners came and tried to enter a village in Kaléya in the Alasouya surroundings, they went there to give vaccinations without the PDH, so the people refused. So they came back to see the head of the prefecture and he put me at their disposal. Because I know the law of the place, I directly went to the sub-prefect and he came along with us to the field. We had to sensitise the people first before any other thing and then the sub-prefect and I were the first people who took the vaccination. Then they accepted us.

In August 2014, eight months after the first case of Ebola in Guinea, a national emergency was declared and the National Ebola Coordination Committee (NECC) was established. This was led by the chief of disease prevention and reported directly to the president of Guinea. The NECC was structured around several key pillars: case management and IPC; surveillance; safe burials; social mobilisation, communication and community engagement; child protection and psycho-social support; and logistics. Each pillar was led by either the MoH, a UN agency or an INGO. Local NGOs were aligned under each pillar, or in some cases supported several pillars. The surveillance pillar, for example, was led by the WHO and supported by RTI and PSI both of which also contributed to the communication and logistics pillars. As in the other most affected countries, UNICEF led the social mobilisation and community engagement pillar. Prefecture Ebola Coordination Committees (PECC) were established in each prefecture. These replicated the national-level pillar structure, although the supporting NGOs were varied across each prefecture and reflected their operational footprint and capacity.

Whilst the NECC improved coordination in the long run, there were reports that weak communication between the NECC and the government early on in the outbreak caused misunderstandings and prevented the rapid development of unified strategic response. In addition, poor coordination of the NECC with the MoH resulted in inequitable coverage, a bias towards Ebola-related action and limited oversight of non-Ebola health problems including those affecting women and children. Eventually international financial and technical
support began to flow into the country, and whilst this brought much needed resources, it also contributed to ongoing coordination and management challenges at all levels.

A standardised Ebola response plan was developed at the national level by the NECC with technical assistance from partners. It was implemented in each prefecture, and key actors including local political and religious leaders became increasingly involved. As one national-level stakeholder explained,

There was an individual plan in the prefecture and also there was a standardised plan that we took into account for every prefecture. For example, as we were working in Dubréka, local health workers and communities told us that the women and the young people would work well with us. But when we went to Bofa, they told us about persistent ritual practices and so we needed to work with the old people and traditional healers. In Coyah it was beneficial to work with Ebola survivors because they gave us a lot of the information we needed about their communities. So in each prefecture we worked with different community members depending on our analysis of the context to make sure that we were working with the right people.

After the initial phase of the outbreak, implementing an effective community-level response was recognised to be a critical component of the strategy to control the outbreak. The formal response was still slow, however, to include CHWs and they were often sidelined in frontline activities despite their advantageous position within communities and their basic health literacy. Their initial under-utilisation at the community level resulted from several factors. The early phase of the response was chaotic and there was no community-based emergency response strategy. The structure of the NECC did not facilitate close coordination with the Department of Prevention and Community Health under which CHWs were formally managed, and components of the response to which CHWs were well suited (e.g. contact tracing) became quickly politicised.

The early phase of the response in the south east of Guinea was largely implemented by skilled health workers with no prior experience of engaging or coordinating CHWs. Initially, many NGOs implementing CHW programmes reduced or withdrew their support of CHWs due to concern for staff safety and restrictions on movement. One NGO who participated in the study admitted that they had been unsure about how to utilise CHWs early in the response, and it was only later that they recognised their CHW network could be highly effective if they task-shifted to community sensitisation. A number of CHWs reported that they did liaise with their health centre chiefs and were a conduit for passing information to their communities, but this was not a formal arrangement. Other CHWs, particularly in Kérouané, suggested that they were inactive for a period of approximately four months from the start of the outbreak in their prefecture. Even as the community-level response became gradually more coordinated under the leadership of the PECC, the personnel who were implementing community-level activities continued to be recruited from outside those communities. Many stakeholders reported that this strategy proved both problematic and ineffective due to community mistrust and the, at times violent, rejection of outsiders. As one national-level stakeholder explained,

Many community workers that were chosen outside the communities were beaten and chased away, but when we selected CHWs from within the communities, they were accepted and our messages were accepted since these CHWs were trusted family members. Through the CHWs we were able to locate and get hold of suspected Ebola patients who had run away out of fear because they are part of them as family members making it easier for the CHWs to know where they had hidden themselves.

Although their lack of early engagement led some CHWs to be fearful of contracting Ebola and reluctant to contribute later in the response, over time the strategy evolved to mobilise existing CHWs to varying degrees and under different pillars. As one stakeholder commented, ‘Later on, we selected the old CHWs, but if there was a gap, we took on new ones’. CHWs were used primarily for surveillance and contract tracing, and to a lesser extent for social mobilisation, but how and when they were recruited and deployed was largely dependent on the partners involved with the different pillars in each prefecture. If a partner had implemented a CHW programme prior to the outbreak, they were more likely to use their ‘own’ CHWs.
In December 2014 the NECC issued guidance regarding the selection criteria for community-based Ebola responders and advised that CHWs be prioritised in each village. Despite this, the politicisation of certain positions, nepotism surrounding appointments and the unprecedentedly high incentives that were offered for many Ebola-related activities meant that even when communities were involved in the selection of their own personnel, who was selected and why did not always follow the NECC guidance. Consequently, the formal involvement of some ‘old’ CHWs remained limited. The experience of one national-level stakeholder emphasised these issues,

I had a problem because I called XXX [senior leadership in the Ministry of Health] and told him that the Contact Tracing Committee was not working well. He told me I shouldn’t say that because it was a good committee and that it was functioning very well, that I should withdraw my statement. I told him no, I cannot withdraw it because it is the truth. The selection process of community-based Ebola workers was incorrectly and inappropriately done. Even a radio interview I did in my zone was not broadcast because I said that the selection process was not working well. But I didn’t care to speak out because I am not working to have a post in the government or to be a minister. I am just working to help people. I will say what is appropriate for my country and not talk just to satisfy people. The CHWs should have been chosen. In the communities, when you talk about health, the first people they believe are the CHWs because they already work in the community and the community members trust them. So we decided to choose them and include them in the CWCs [Community Watch Committees]. We also wanted to make the contact tracers because they are more aware of all of the situations in the communities. So, even when the national criteria was made for selecting people to be part of the CWC, in some areas the CHWs were abandoned in favour of choosing new people. This was because the village chief decided on who should be selected and insisted that his daughter be chosen and put in the committee without her even satisfying the criteria for selection. So that was how the CHWs felt abandoned. But we tried to restructure and do the process in a fairer manner.

When CHWs were recruited into the response, inaccurate CHW registers and limited communication between the different pillars and numerous partners resulted in some CHWs being employed by multiple partners to conduct different streams of work. At the same time, others were over-looked in favour of community members being recruited and trained to conduct community-based Ebola-related activities as ‘new’ CHWs. As discussed above, this lack of coordination led to the over-burdening of some CHWs and the under-utilisation of others.

Although several participants suggested that many issues with communication and coordination were never entirely resolved, particularly with regards to contact tracing, prefecture-level stakeholders reported that the situation did improve over time. Partners and activities were mapped through a process of micro-planning within each prefecture, and daily inter-pillar meetings provided a platform for the presentation of up-to-date situation reports, challenges faced and plans formulated.

Roles and responsibilities

Their level of health literacy and basic technical skills set CHWs apart from other community members in terms of the roles they could play in the community-level response to Ebola. As discussed above, some had formal roles as contact tracers and case finders under the surveillance pillar, linking community members to health facilities and providing community based surveillance (CBS), particularly later in the response. They also worked on community engagement and as social mobilisers, and had more informal roles in their communities as ‘caregivers’, bringing food and water to quarantined families. In reality, CHWs often carried out multiple roles, either in parallel or simultaneously, and were active in both formal and informal capacities.
Case finding and referral

In each of the four prefectures included in this research, CHWs reported that they were involved in identifying and referring sick community members to health facilities. These activities were initially based on training they received from their respective affiliate NGO and in the earlier phases of the outbreak, identification was done through word of mouth, opportunistic observations in the community and contact tracing. Once identified, the CHW would take a case history and conduct a basic ‘no touch’ visual assessment (although later many were provided with contactless thermometers), would take steps to ensure the individual was isolated and report their case to the relevant health authority.

As the outbreak progressed, an active case finding strategy was adopted in areas with high rates of Ebola transmission. This involved a daily door-to-door search for sick people followed by isolation and prompt referral and was incorporated in the mandate of the Community Watch Committees (CWCs) that were established under the social mobilisation pillar in affected areas from December 2014 (discussed further below). As members of the CWCs, CHWs were trained by partners and the PDH to conduct active case finding. In discussing this activity, one prefecture-level stakeholder explained,

They [the CHWs] went to the communities asking the community members if they had somebody who developed fever over the night, or someone who vomited or had headache and so on. Also, they were given thermo-flashes [contactless thermometers] that they used on all the community members in the search for those who had fever. If somebody in the community had fever, they were a suspected case. Someone having malaria, diarrhoea or vomiting, they were a suspected case.

The process of reporting and referring sick community members was similar in each prefecture, although it changed over the course of the outbreak. Early in the response, the standard procedure was for CHWs to complete a referral form for each patient and contact the health centre chief at their affiliate health facility. The health centre chief would then arrange for the patient to be transported to the nearest designated health facility. Upon arrival at the health facility, the patient would be assessed by a health worker and, in the early stages of the outbreak, either isolated and managed at the facility, transferred to a higher-level facility with isolation capacity or moved directly to the nearest Ebola Treatment Unit (ETU). By December 2014, there were only four operational ETUs in Guinea; one in Conakry, Guéckédou, Macenta and N’Zérékoré, with a further four under construction, including one Kérouané (WHO, 2014a). There were also only four laboratories in Guinea with the capacity to conduct Ebola testing, in Conakry, Coyah, Macenta and Guéckédou. Consequently, many community members were required to travel a significant distance to access the nearest ETU, and there were often significant delays in confirming their Ebola status. Early in the outbreak, the ambulance system was poorly resourced and overstretched, resulting in extended periods of time from identification and referral to patient pick-up. This contributed to community perceptions of isolation, frustration with the response and heightened resistance.

Over time the referral process was streamlined, but still remained challenging. Most CHWs reported that their first contact point continued to be their local health centre chief, who would then call the ‘Ebola Alert Line’ staffed by the PDH who would coordinate the appropriate response (for example, if the alert was to register a death or to report a dead body, the Red Cross dead body management team would be deployed). With the establishment of Community Care Centres (CCCs), patients were referred and transported there rather than to local health centres, and then onwards to ETUs as necessary (discussed further below). In an attempt to keep pace with the high demand additional ambulances were procured in the most affected prefectures. Strategies were also adopted to encourage referral compliance. CHWs and community leaders played an important role in consulting and counseling community members before calling the ambulance and sensitising referred
patients before the Rapid Response Team arrived. The response teams also included community sensitisers and security officers amongst their core members to negotiate with communities and help facilitate referrals.

Many stakeholders asserted that active case finding played a major role in breaking the chains of transmission as it supported the early detection and referral of Ebola cases thereby increasing their chance of survival. This was positively reinforced by the return of survivors to the community who contributed to the demystification of ETUs and the related shift towards earlier care seeking. The majority of stakeholders engaged in the study considered CHWs to have been particularly well positioned to take on the role of active case finders.

Contact tracers

Under the NECC Surveillance Pillar, the WHO was responsible for coordinating contact tracing across all the prefectures included in this study. Early in the outbreak, there were multiple problems with the contact tracing strategy. According to a number of participants, contact tracers were not formally trained or well equipped (for example, they were not given thermometers), line listing of Ebola case contacts was not rigorous and report forms were not used until much later in the outbreak. Many contact tracers were not selected from within the communities to which they were deployed, and a number of participants suggested they faced significant resistance and hostility from community members.

Over time, however, the contact tracing strategy improved and new selection criteria, training, reporting and supervision structures (usually by the health centre chief) were introduced. The involvement of communities in the selection of their own contact tracers led to improved relations, and although contact tracers continued to experience challenges and resistance from some community members, they appeared to be more accepted than outsiders. In the four prefectures included in this study, not all CHWs were selected to serve as contact tracers. Those who were, reported variations in the training, reporting, supervision and materials provided (discussed further below). Overall, CHWs in Dubréka and Forécariah reported to have been better supported to conduct contact tracing than CWHs in Macenta and Kérouané. In Forécariah, CHWs reported that they were particularly well supported by the WHO and indicated that this increased their confidence levels to undertake contact tracing.

The way we were used to do it was that if the WHO suspected a case of Ebola in one family that had been referred to the health centre, they would call us to go and take the list of those family members and follow them up every day, morning and evening. Every morning and evening we would go to the family of that suspected case with the WHO team. On reaching there, we would start by sensitising them to accept and allow us put the thermo-flash [contactless thermometer] on them. In doing the thermo-flash, they trained us particularly to not go closer to the person while putting the thermo-flash on him. Even if your pen falls down along the process, you should not take. We did that first once in the morning, and in the evening we come back to do the same thing.

In many communities, it was the chiefs, women leaders, youth leaders or in a number of cases, traditional healers, who were selected as contact tracers. Whilst some stakeholders suggested that CHWs may have been the most technically capable community members to serve as contact tracers, the selection of non-CHWs occurred for several reasons. In some villages, there was no CHW to select. In others, local leaders deemed it more effective to use individuals who community members respected and trusted more than their CHW. Selection was not always based on meritocracy, however, and examples of nepotism were frequently reported (as discussed above). As a PDH representative in Forécariah explained,

Contact tracing was a bit complex because we had some families who were more resistant to accepting the contact tracing team. So what we did was to look for somebody who had good collaboration with the resistant
family in that village, not the community health workers but somebody that the family respected very much to go every morning and evening to monitor and give us the report.

Stakeholders forwarded varied opinions about the level of technical skill in community members selected to be contact tracers. One national-level stakeholder suggested that although the ‘old’ CHWs were initially more proficient at contact tracing activities, over time others became equally competent. Others asserted that non-CHWs did not have the capability to master the more technical aspects of the role, so in some prefectures they reverted to only deploying old CHWs as contact tracers.

Social mobilisers and community sensitisers

Many of the activities that CHWs adopted during the outbreak included community mobilisation around key Ebola prevention messages, changing behaviours and encouraging compliance with early detection, reporting and referral. CHWs reported that they delivered door-to-door Ebola sensitisation messages in their communities from early on in the response, even informally. In Dubréka, Forécariah and Kérouané, CHWs received training and variable supervision to conduct these activities from either their affiliate NGO, the PDH or other partners. In Macenta, CHWs did not initially receive any formal training on sensitisation. Instead they were given verbal instructions from the PDH or opportunistically gathered information from various sources including health workers or other Ebola response workers to share with their communities.

In December 2014, CWCs were introduced under the social mobilisation pillar in an effort to address significant and persistent community resistance to Ebola control efforts. The strategy was driven by the premise that to gain community support for response activities, community members themselves must actively participate in the planning and implementation of activities. As one national stakeholder confirmed, ‘When the communities and their leaders are aware of the planned activities in their communities and are included in them, they’ll open doors for you to implement your activities, but if they’re not aware they will never accept things’. Members of the CWCs included community leaders, religious leaders, women leaders, youth leaders, traditional healers, health committee representatives and CHWs. Members were specifically chosen by the community (usually with the support of the health centre chief) to ensure that those most resistant to Ebola response activities were included. As one PDH representative in Dubréka explained, ‘We attacked the problem at the source by training and including in the CWCs youths, since youths were throwing stones at Ebola workers. And we included women leaders since women were often against safe burials conducted by the Red Cross’. National-level stakeholders reported that over the course of the outbreak, 2,975 CWCs were established across the country, each covering between one and three villages. The selection of CWC members could be fraught, however. One national-level stakeholder concluded,

The problem I observed with community surveillance was that everyone was just interested in receiving the money the partners were bringing at the end of the month. So instead of the selection being done in the appropriate way, people started selecting workers based on family relations and familiarity. The selection process started at the level of the paramount chief who could first choose people from his household before extending it out to the others. That means that the selection process of the CWCs was not done based on merit and qualification, but by favoritism and contact. So the CWCs were not functioning very well because the selection was not properly done.

CWC activities included community-based surveillance (for example monitoring for strangers or sick people entering the village); promoting compliance with the isolation and referral of sick people; active case finding and referral to the CHW or directly calling the Rapid Response Team; promoting safe and dignified burials; reporting the deceased; establishing border screening; and taking care of orphans. All of these activities included social mobilisation on the prevention of Ebola, and dispensing or debunking ‘Ebola rumours’. CWCs
would often work alongside other Ebola responders, including the safe and dignified burial teams, to facilitate community acceptance and compliance.

Although CWCs were trained in standard Ebola IPC measures, many CWC members reported that they did not always adhere strictly to the designated ‘safe practices’, but rather integrated modified IPC into existing local practices. Whilst such adaptations may have increased community acceptance of Ebola IPC measures, it also meant that risky behaviours were perpetuated. As one CWC member in Macenta explained,

The CWC received [from UNICEF] some materials like chlorine, the kits [Ebola prevention kits], and soaps. We were sensitising the community members to wash their hands day and night. We also used to go from house-to-house to check if there were any sick people. As the imam said, we would try to wash the sick people with leaves, one or two times, and if it did not work, we would sensitise the person to take courage and allow us to call the [Rapid Response] team to come with the ambulance to take him with them to Gueckédou for treatment. Sometimes if we called and the line [Ebola Alert Line] was not good [i.e. poor connection or network coverage] or they didn’t answer, then before they [Rapid Response Team] would come, we would isolate the person in the community by giving him a separate room to stay in until the time that they would come for him.

Multiple stakeholders attested to the effectiveness of CWCs in building support for and facilitating the efforts of CHWs and others conducting Ebola-related activities, and as one CHW in Kérouané confirmed, ‘The support of the CWC was good for us. They reinforced the work we were doing and since they were mostly composed of leaders, that made it easier for the people to accept our efforts’. Similarly, a community leader in Dubréka stated ‘if the community leaders had not been included at all, community sensitisation would not have been possible’. Not only were the CWCs sensitising the community, but through leading by example, they could also influence behaviour change both positively (and negatively as the quoted narrative at the end of the previous paragraph indicates). As another community leader in Dubréka concluded,

As community leaders, we decided to set an example by sending our children to school first, using the thermo-flash [contactless thermometer] on them and making sure they washed their hands before going to class. So when the other community members were seeing our children being thermo-flashed and washing their hands to come to class, and that nothing evil was happening to them, they then started to believe that there was no truth in what the people were saying about the thermo-flash being poisoned and so on. They also started sending their children to school.

Both national- and prefectedure-level participants confirmed that some of the problems related to weak coordination, supervision and engagement at the community level, particularly early in the response, were overcome to some degree when social mobilisation partner platforms or ‘hubs’ (SMP) were established. These structures were set up at both the prefecture and sub-prefecture level from January 2015 with the support of UNICEF and in collaboration with local community-based organisations (CBOs) (UNICEF 2016a). SMPs were led by social mobilisation experts (both local and international) and provided supervision and training of the CWCs on key social mobilisation activities. They also worked to ensure effective coordination was achieved between different teams of Ebola responders who incorporated a component of community engagement (including social mobilisers, surveillance teams, burial teams) to ensure rapid and effective action in response to any alert or Ebola-related event.

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6 Community members reported washing people with specific leaves was part of traditional medicine in Guinea.
Burial teams

The majority of stakeholders involved with the study confirmed that CHWs were not members of safe and dignified burial teams.

3.2 Costing and financing

Data about the costing and financing of CHW Ebola-related activities was not made available during the study. Details about incentives are presented in the section on human resource management below.

3.3 Human resource management

The Ebola response resulted in the rapid expansion of actors involved in the community-level health system. As discussed, many new community-based workers were quickly recruited by the PDH and Ebola response partners during the initial phase of the response to conduct community-level Ebola-related activities. As one national stakeholder recalled, ‘The NECC was recruiting people left and right even without knowing their backgrounds and respecting standard CHW selection criteria’. Over time, as it became apparent that the new recruits were not well accepted or tolerated by communities if they were not resident or previously known, existing CHWs had their duties expanded to include Ebola-related roles, which they conducted either in addition to or in place of their routine MNCH activities (discussed in detail in the previous chapter). In recalling the changing approach to recruitment and human resource management, one national-level stakeholder concluded,

The initial approach was to try to recruit and use new CHWs. They were different from the old ones who were used to doing the other community-based health activities. But, when the response team realised that there was huge reluctance in the communities to accept the new CHWs and there was often violence against them, they decided to recruit the existing ones [into the response] instead. The idea at the beginning was that we tried to have more and more CHWs that were different from the existing ones. But when we realised that it was too costly and they were not achieving the expected results, we tried to come back to the existing ones who were very well known. So we asked the PDH to give us the list of the old CHWs, and we started to get them involved.

Not all villages had resident CHWs prior to the outbreak, however, so it remained necessary in some areas to expand the CHW workforce with new CHWs trained in Ebola-related activities, particularly for community-based surveillance and contact tracing. The importance of recruiting these new CHWs from the community in which they were to operate, and involving the community in the selection process was again emphasised by many stakeholders.

Training

Whether CHWs received training, what training they received and who provided it, depended on the prefecture, the implementing partner(s) they were associated with, and the timing of the outbreak. As the outbreak developed and the response strategy was refined, training (both refresher training and on new procedures) was given on a rolling basis. As a PDH representative in Forécariah recalled, ‘The training was dynamic, since what could be real one day was not necessarily the reality the next day. Each time there was a new idea or information, we trained the CHWs’. In prefectures that were affected later in the outbreak, including Dubréka and Forécariah, CHWs were trained in preparation for Ebola, usually by partner organisations, whereas their counterparts in earlier-affected prefectures, such as Macenta, had little
preparation time and were often deployed with limited or no training on specific activities or protection measures. In Macenta, a CHW confirmed that they had not received any formal training to do contact tracing and in Kérouané, another CHW reported they only received training on contact tracing four months after they had started this activity. Also in Macenta a number of CHWs reported not having received any formal training on Ebola sensitisation; rather they gained information through word of mouth from the PDH, health centres or other Ebola responders passing through their communities. In contrast, CHWs in Dubréka and Forécariah reported that they were trained in a package of activities including surveillance, contact tracing, communication and social mobilisation. Across the study, the majority of CHWs confirmed that they had, at some point, been trained on Ebola prevention, signs and symptoms, and how to manage suspected case in their community. Stakeholders from UNICEF also suggested that CHWs received standard training on social mobilisation and community surveillance that had been specifically developed for trainees with no or low literacy levels.

Prefecture-level stakeholders expressed mixed opinions about the quality of training received by CHWs during the outbreak. In Macenta and Forécariah prefecture-level stakeholders suggested that CHWs had received sufficient training. Others in Kérouané and Dubréka were concerned the ‘rapid fire’ trainings necessary for the emergency context had been insufficient. A number of stakeholders reported particular concern that the trainings were not sufficient to up-skill newly recruited CHWs to effectively perform Ebola-related activities, and that consequently the cadre of ‘new’ CHWs were less competent than the ‘old’ CHWs. Representatives from the Ministry of Health agreed that it was challenging to rapidly train largely uneducated community members on technical Ebola-related activities, but stressed that the need to gain community buy-in could only be achieved by including community members in the response, and that communities increasingly demanded this involvement for themselves.

We were teaching both the old and new CHWs on things that they were not supposed to do and that would provoke the spread of the Ebola virus and so on. We had to do so because they know the community much better than us technical experts. And we were also training them on how to identify or recognise cases of Ebola among their own people, how to identify somebody who started to present with the symptoms of Ebola and how to refer such a person to the health centre or clinic. So these were some of the areas in which we gave them training. We could not do the training to a high level because most of those volunteers were not medically trained.

Incentives

As in Sierra Leone and Liberia, the significant influx of time-limited emergency funds during the outbreak allowed partners in Guinea to offer CHWs and other ‘Ebola workers’ incentives that were inflated compared to normal scales of remuneration. Payments were provided for variable periods of time depending on the activity, but usually for no longer than six to eight months. High incentives were intended to offset the hazard associated with working on the frontline of the Ebola response, yet they led to a number of unintended consequences, some with ramifications that continued to be felt in the post-Ebola recovery phase. Ensuring promised payments were delivered regularly and on time was a major logistical challenge. Stakeholders frequently reported variable payment rates depending on the timing and location of their activities, the implementing partner they worked with, and their specific role. Across all the prefectures included in the study, many of the CHWs who conducted social mobilisation activities or case finding under the supervision of their regular NGO or the PDH, received no additional payment despite the risk of exposure associated with this work. In Macenta, a CHW who worked as a contact tracer under the supervision of his health centre chief reported not to have received any payment for work, yet CHWs in Dubréka, Forécariah and Kérouané specifically recruited as members of a CWC or as contact tracers by international organisations (e.g. UNICEF and WHO respectively) were reportedly paid GNF 400,000 – 800,000 per month (approximately USD 43.40 to 86.80). CHWs in Kérouané reported that they received this level of payment from several organisations.
simultaneously as they had been recruited to perform different Ebola-related activities in parallel. Such payment disparities not only demoralised many CHWs who were working voluntarily, but contributed to the politicisation of certain duties.

Some national- and prefecture-level stakeholders shared the opinion that CHWs were primarily motivated by the high financial incentives provided during the outbreak. Representatives from a number of partner that implemented community-based MNCH programmes reported challenges in retaining and motivating CHWs to continue regular MNCH activities. As one stakeholder emphasised,

One main problem was that if a CHW working on malaria was being paid GNF 80,000 [approximately USD 8.70] was offered GNF 400,000 [approximately USD 43.40] by an NGOs to conduct Ebola activities, they would neglect the area where they were paid less and put more effort in to where they are paid more. It was a big challenge.

Other stakeholders, however, considered ‘old’ CHWs to have been more reliable in comparison to those newly recruited, and motivated more by a commitment to their communities. CHWs themselves widely claimed to have been motivated by a desire to protect their communities. In a focus group discussion in Dubréka, CHWs agreed, ‘What motivated us was the fact that the work we were doing was not for anybody else, but we were doing it for our communities’. Similarly, in Forécariah a CHW stated ‘What motivated us was the love of our community because you must sacrifice yourself to save others living around you’. It was also notable that CHWs themselves indicated that they were more motivated to act when they were provided with a safe and enabling work environment. This included being provided with sufficient training, equipment (including PPE, motorbikes, cell phones, phone credit and contactless thermometers) and supervision.

3.4 Supply chain management

Nationwide, health authorities reported that they lacked sufficient emergency stockpiles of IPC materials to effectively protect their workers during the early phase of the outbreak. This included limited Personal Protection Equipment (PPE), contactless thermometers, buckets, soap, chlorine and hand sanitiser, and resulted in unsafe contact with patients as health workers were forced to improvise with the rudimental materials they had available. It also compromised the quality of Ebola-response activities. For example, for a number of months early in the outbreak, CHWs in Kérouané and Macenta undertook contact tracing without contactless thermometers and in their assessment of contacts and cases had to rely solely on the patient’s history and reporting of symptoms without being able to test for an elevated temperature.

After initial shortages, large quantities of IPC materials and EVD-related equipment were brought into Guinea by implementing partners and donors. Partners frequently used their own emergency procurement systems and, particularly early in the response, bypassed the government’s relatively weak national supply mechanisms. Supplies and equipment were distributed via the organisations managing activities under each pillar and were eventually cascaded down to the health centres, CHWs and other Ebola workers. In the later phases of the response, supplies were coordinated by the Guinea Central Pharmacy and stock-piled at the Central Medical Store before being distributed to the District Medical Stores and onto the health centres. There were, however, persistent shortages of certain materials throughout the outbreak, including chlorine, soap and buckets and even when supplies were available, they were not always used. CHWs in Dubréka reported, for example, that although they were eventually supplied with protective equipment, including boots, gloves, caps and face masks, the communities in which they worked would often not accept them if the wore such personal protection. CHWs in Kérouané explained that to gain access at both community and household levels, they often had to conduct their activities with the only most basic of PPE (e.g. gloves), although in some cases, even gloves were not accepted.
3.5 Service delivery and referral

As discussed above, specific Ebola-related activities carried out by CHWs varied by prefecture, implementing partner and timing of the outbreak. Notably, many CHWs, particularly in Macenta and Kérouané had very limited involvement in Ebola-related activities until later phases of the outbreak in their prefectures. Eventually however, CHWs in all prefectures became involved in identifying, isolating and referring the sick, and in related community sensitisation activities.

The complex socio-political context of Ebola, combined with already weak links between communities and the under-resourced formal health system, resulted in significant barriers to the effective delivery of Ebola-related services by CHWs. As in the other most affected countries, Sierra Leone and Liberia, the most significant challenges faced by CHWs in Guinea were related to effecting behaviour change within their communities and the identification and referral of sick individuals (both suspected Ebola and non-Ebola cases) to health facilities.

Despite many CHWs having been trusted and respected by the communities they served prior to Ebola, their association with health facilities, the government and international organisations, and their engagement as Ebola responders, resulted in significant fear, mistrust and rejection of CHWs by communities. CHWs were often threatened and faced discrimination even within their own communities. As one CHW in Dubréka stated, ‘We were not really feeling secured, our lives were in danger’. Another CHW in Forécariah recalled, ‘During Ebola it was difficult to provide our services because many people didn’t believe or trust us, the community members were insulting us, abusing our mothers, throwing stones at us and considering us to be Ebola carriers’.

Some of the CHWs who participated in the study in Kérouané reported that as a consequence of this environment and due to low morale and concern for their own safety, they reduced their activities to a minimum. Many caregivers and community leaders confirmed that they had been mistrusting of CHWs in the initial phase of the outbreak. As a caregiver in Macenta explained,

Why many people were affected by Ebola and why was it difficult to prevent new people getting infected was because many people did not believe or trust that Ebola was real. Although our CHW was sensitising us in this community, most people said that what the CHWs were saying was a lie.

Mistrust in CHWs, compounded by initial messaging that Ebola was fatal and untreatable, contributed to the slow uptake of the Ebola messages delivered by CHWs later in the outbreak. Many community members reported that they did not adopt known Ebola prevention and control behaviours until after experiencing Ebola deaths in their own community. Like many other community members, a caregiver in Forécariah concluded, ‘It was only when we started seeing our family members dying of Ebola that we started understanding and trusting the advice that our CHW was giving us’. Other community members stated they were reluctant to adopt the Ebola-related practices promoted by CHWs since they conflicted with cultural norms. A caregiver in Kérouané explained, ‘It was very hard for us to accept the messages they were giving us to us to isolate our patients. Because according to our tradition, when a family member is sick, we will come close to him, cherish him, feed him, wash him’. It was commonly reported that community members hid their sick and performed unsafe burials despite having a high level of knowledge about Ebola prevention and control messages.

Across all the prefectures included in the study, CHWs reported that sick people frequently attempted to evade their detection during the outbreak, often hiding on their farms or in the bush. Even for symptomatic patients that were highly likely to have Ebola, community members turned to trusted local healing practices rather than biomedicine, either seeking care from their traditional healers or using home remedies and self-care. As one community leader in Dubréka recounted, ‘Anybody that was sick at that time was just going into the bush to remove some herbs to boil and drink’. Sick community members who were identified by CHWs displayed significant resistance against being referred to either a health facility or an ETU. From early in the outbreak, suspected cases had been removed from their communities by ambulance and taken to ETUs, with limited
information or feedback to their families. Consequently, the ambulances, ETUs and associated response workers were considered to be extremely dangerous and treated with great suspicion by community members. In Macenta caregivers recalled how their loved ones were ‘carried away blindly’ to distant treatment centres, and the fear of ambulances (and possibly the chlorine spray that was used) led to violence in some communities. In Dubréka, ambulances were set on fire by angry and frightened community members. As a community leader in Macenta stressed, ‘If you hear that a car kills someone, or you saw a car kill somebody, when you see a car coming another time will you stand or will you run away? You’ll surely run away for your life, so that is how it was’.

Initial delays in communication with Rapid Response Teams (via the Ebola Alert Line) and the limited capacity of emergency transport resulted in patients having to wait for prolonged periods for an ambulance to arrive, during which time CHWs struggled to isolate and care for community members. In Macenta one CHW recalled that ‘The ambulance only came sometimes and at other times the person would have to take a taxi and go’. Similar delays were experienced with the Safe and Dignified Burial Teams and this further elevated the distress and frustration felt by communities. As a community leader in Dubréka recalled, ‘Because the Red Cross burial teams were busy, you could call them but they would not come on time. By the time they did arrive, the corpse was already rotten, that disturbed the community so much’.

Communities widely avoided the use of health facilities for any kind of illness, particularly when Ebola was in active transmission in their prefecture and especially during the initial phase of the outbreak. Caregivers in Dubréka reported that ‘Some of the children were having fever, but because we had fear, we could not carry them to the health centre’. In both Dubréka and Kérouané, community members renamed health facilities ‘Ebola Centres’. Caregivers engaged in this study were articulate about their fear of being exposed to Ebola and infected due to poor IPC measures at health facilities. They were also aware that health workers had died from Ebola, and may therefore not be able to prevent the infection, or would pass on the infection inadvertently. Others believed the rumours that workers at health facilities deliberately infected all their patients with Ebola. A community leader in Macenta explained, ‘Pregnant women and children suffered in this community during the outbreak because they were afraid to go to the health centre thinking that if they did, they could be given medication that would lead to their death’.

Caregivers were also concerned that if they did attend health facilities, the service received would be of poor quality. Those from Ebola-affected communities perceived themselves to have been particularly stigmatised. As one caregiver in Macenta reported, ‘The ability to get care for our children was disturbed because our village was identified as the Ebola centre. So even when we were going to the health centre, they were separating us from other people. They put us aside and the health workers would not straight away diagnose or treat us’. Limited supplies of essential medicines (although often no worse than at ‘non-emergency’ times) and the frequent absence of health workers from their posts acted as further disincentives for people to seek health services. In Macenta, one caregiver who had been pregnant during ‘Ebola time’ explained that she ‘abandoned’ the health facility after she tried multiple times to receive routine ANC, but could not access the required services due to medicine stock-outs or the lack of qualified staff.

Data from a rapid assessment of the health system during the outbreak in Guinea, reported that 15% of facilities surveyed had closed and 13% had suspended their services for a period (Barden-O’Fallon et al 2015). In many of the research sites included in this study, the availability of health services was reported to have reduced. In Macenta and Kérouané, health workers reported that their health centres had been closed for a number of months during the outbreak, primarily due to enforced quarantines after health worker infections. At one health centre in Kérouané, seven of fifteen staff died from Ebola, leaving remaining staff fearful and traumatised. As the health centre chief recalled, ‘People thought that we [the health workers] were the ones sharing Ebola and we the accused became victims so nobody could bear it and stay, especially when you see people die among you’. Some health facilities that remained open in highly affected areas did so with
significantly reduced staffing capacity. This was often the result of health workers either task-shifting to Ebola-related activities (such as becoming rapid response team members); not returning to work on instruction from the health centre chief due to high risk levels; or deciding to leave their posts due to concerns for their own safety and fear of infection.

Over the course of the response, strategies were adopted to both increase acceptance of health services and ensure the rapid isolation and removal of suspected Ebola cases from communities, thereby limiting the number of potential contacts. As part of the effort to promote behavioural change within communities, the government issued a number of decrees to assist in controlling disease spread across the country. Some were directly associated with actions rooted in deeply held cultural norms, such as burial and traditional healing practices, whilst others prevented households from hiding the sick and enforced compliance with referrals for EVD testing. While these decrees were not as strictly enforced as the Ebola bylaws introduced in neighbouring Sierra Leone, certain security measures were adopted to encourage compliance. Referral procedures also became more streamlined with the development of Ebola Alert Units in each prefecture. The Ebola Alert Line connected workers on the frontline to the Ebola Alert Units that were staffed by the PDH and served to coordinate the appropriate response to any community alert or event called in. Early identification, isolation and treatment of Ebola patients was also improved through Ebola screening and triage systems established at health facilities with the support of implementing partners. Community Care Centres were established within communities in Ebola affected prefectures and community members were encouraged to present at a CCC for any illness. Non-Ebola cases were treated as necessary, reportedly for free, whilst suspected Ebola cases were isolated at the CCC for monitoring and testing, and if necessary were then referred to the ETU. In the later phases of the outbreak (April-December 2015), a ‘micro-containment’ approach was adopted in the prefectures that remained affected by Ebola and had active transmission chains, including Dubréka. This strategy included restricted movement in and out of Ebola ‘hotspots’; intensified sensitisation, social mobilisation and active case finding in and around the hotspot; the construction of mobile health clinics within affected communities; food distribution; and the development of water points.

Despite the problems identified between CHWs and community members discussed above, in the majority of cases, the relationship between CHWs and their own communities proved to be resilient over time. Community members frequently confirmed that familial relations led them to trust their CHW. As one community leader in Macenta explained, ‘Our CHW was determined even during Ebola. He stood up and said he was born here and grew up among us and so we should not fear him because he would stand for us, and would not harm us in any way, and instead we should work together to chase out this sickness of Ebola’. In rebuilding levels of acceptance and trust for CHWs, numerous stakeholders emphasised the importance of securing the support of key community actors through the CWCS.

It is notable that many community members confirmed that they only started to follow the advice of their CHW after they had witnessed their neighbours and family members becoming ill and dying, and that they were encouraged to seek CHW services and comply with their referrals when they had seen other community members returning safely after treatment. This aspect of ‘seeing is believing’ was a powerful trigger for positive action. As one CHW in Macenta recalled, ‘In the beginning people were not even coming to us to refer them. But when we carried out sensitisations and those who we referred initially came back healthy, many of the others were encouraged now to come to us’. Community action often came too late, however, and as one community leader in Kérouané commented,

*It was not only because the imam and CHW were sensitising [the community] that brought a level of understanding, but it was also because people were dying every day like chickens and non stop… So they [the community] said to themselves that what the imam and the CHWs had been telling them was true and then they started showing understanding and listening to us.*
3.6 Communication and social mobilisation

Over the course of the Ebola outbreak it became evident that what messages were delivered, who delivered them and how they were delivered were all integral to the effectiveness of the social mobilisation and community engagement strategy to reduce Ebola transmission. A number of national and prefecture-level stakeholders indicated that early in the outbreak, CHWs had not been involved in the formal response for social mobilisation and community engagement on Ebola prevention and control. Instead these activities had been conducted by personnel originating from outside the communities to which they were deployed. It was not until after these new recruits experienced significant community resistance that the strategy was revised and CHWs known to their communities were selected by Ebola response partners (and sometimes their affiliated NGO) to work under the social mobilisation pillar of the response. As a PDH representative in Macenta explained,

\begin{quote}
At the initial point of the outbreak we didn’t involve the community health workers in the sensitisation process, instead we began using people from other places and foreigners to come to the communities. But this made the communities very resistant to their messages. It was not until we started using the CHWs from the communities that the people came up understanding and accepting the messages because CHWs were their own children in whom they had trust and confidence.
\end{quote}

In terms of content, some of the initial messaging across the three most affected countries was highly problematic and had ongoing and negative ramifications throughout the outbreak. The message that Ebola was not treatable and could lead to death (combined with the experience of many community members dying of Ebola in health facilities) generated high levels of fear within communities and had the unintended consequence of producing a sense of ‘therapeutic nihilism’ amongst many affected (both directly and indirectly). As one PDH representative in Forécariah explained, ‘When communities received the message that Ebola had no treatment, they decided that when a family member was infected, they were better to keep them at home and die there’. A community leader in Forécariah also explained this community rationale during the early phase of the outbreak, ‘We knew that many people who were going to the hospital died, and if we should go to the hospital we would die also. So why should we go to the hospital and not just stay at home and die there?’. In addition, the ‘textbook’ signs and symptoms of Ebola that were included in the messaging were not often the symptoms experienced by those infected in Guinea, and this contributed to the delayed detection of suspects and deepened mistrust in the response. The initial communication style used by response personnel was one-directional and did not facilitate meaningful dialogue with communities. As one national-level stakeholder reported,

\begin{quote}
To start with, the Ebola responders didn’t take the time to explain to communities about the danger of the epidemic and it just seemed like they were working against the community traditions. Because, according to tradition, when somebody dies, the families are the ones to wash the corpse, dress it, dig the grave, do the burial and all. But we were not able at the initial stages of the outbreak to explain to them why we used the body bags for burial. We should have explained to them that anybody who died would be ‘bringing out secretions’ [sic.] and one milliliter of that Ebola secretion contains seven billion viruses. I think if we took our time to explain to them that this is what happens when someone dies of Ebola, and if you allow him to stay a long time in the village and allow people to touch the corpse, the secretion that comes from him will infect many people. We were not able to tell them from the outset to come and see how we washed the corpses. What the communities thought about us washing the corpses of their relatives was that once we went to wash them, we extracted blood and removed some important parts from their bodies for rituals. When someone dies in our culture, even his clothes we take and share amongst ourselves and give to other people, but we did not let them know that once the dead person had used those clothes that anybody who used them would also be infected. We only limited our warnings to the sweat of a victim, his saliva, vomiting, stool, blood and so on, but we didn’t tell them that even the clothes that the person was wearing were a means of contamination.
\end{quote}
Over the course of the outbreak, the messages that were delivered at the community level evolved to emphasise that, for any illness, early presentation at a health facility provided the greatest chance of survival. Referral processes and case management were also clearly explained to community members.

As highlighted in the previous sections, many CHWs were involved in social mobilisation and sensitisation through other Ebola-related duties and therefore conveyed key Ebola messaging in both formal and informal capacities. One CHW based in Macenta explained,

\textit{In our sensitisation messages, we encouraged the community members to not be afraid to come to us if they had any signs or symptoms of infection. We told them that they would be taken by the Rapid Response Team to Macenta for treatment, and that was far better than remaining in the house and dying. We advised them that at the health facility if the test proves positive for Ebola, then the health workers will give them the treatment they deserve and if it is another sickness, they’ll also give them the corresponding treatment that can help them.}

A variety of strategies were employed to communicate key messages and engage communities in Ebola prevention and control. Prefecture-level stakeholders commonly reported that, given its broad coverage, the ‘rural radio of Guinea’ was a powerful channel for communication between Ebola responders, including CHWs, health workers and communities. Radio was also seen to be less invasive or threatening than physically entering communities, although on-the-ground activities were also deemed important. CHWs reported that they went door-to-door to convey sensitisation and messages, visited farms to engage people whilst they worked on their land, organised community meetings, and undertook opportunistic sensitisation at community gatherings (such as weddings or Friday prayers). Visual aids (such as leaflets explaining Ebola signs and symptoms and IPC measures) were considered to be useful by CHWs in facilitating community understanding. Strategies to ‘demystify’ Ebola were also adopted, including the organisation of community visits to ETUs to observe patient care, and recruiting survivors to share their experiences and encourage early care seeking in others. Some communities implemented Ebola ‘decrees’, that enforced the acceptance of burial teams or ETU referrals for example. In Dubréka, community leaders reported this strategy was most effective in promoting the adoption of Ebola prevention and control measures. As one community leader recalled,

\textit{It was the fear, because if you, as the family head, were taken to the court to spend the whole day seated there, that was shameful. So it was the fear that made us accept the Ebola activities. It was not actually that we saw them as good processes, but it was because of the fear that we accepted the Ebola rules.}

Coordination of social mobilisation, communication and community engagement occurred under the NECC’s social mobilisation pillar. Sub-divisions were established under the pillar to coordinate with various components of the broader response, and as discussed above, social mobilisation platforms were established under the PECCs to support coordination with implementing partners at the prefecture level. Later in the outbreak, when more robust mechanisms for community-based case detection and reporting were established, lines of transmission could be more easily identified and the response was able to target social mobilisation action based on epidemiological data at the local level. By the end of 2015, UNICEF Guinea reported that 1,427,664 households had been engaged in door-to-door Ebola sensitisation campaigns; over 22,000 social mobilisers had been deployed, including the members of 2,487 Community Watch Committees; 18,850 youth leaders, 1,000 women leaders and 4,324 religious leaders and been trained in social mobilisation (UNICEF, 2015c).

**3.7 Supervision and performance quality assurance**

Many stakeholders reported significant weaknesses in reporting and supervision for most community-based activities, particularly early on in the outbreak. This led to poor quality implementation of activities and made
it more difficult to bring Ebola transmission under control. Health authorities recognised that CHWs (both old and newly recruited) did not have the skill levels of health professionals and therefore required relatively intensive supervision, particularly for contact tracing and to a lesser extent for community surveillance and sensitisation. Over time the structure, regularity and quality of CHW reporting and supervision generally improved, although it continued to be dependent on the prefecture, type of activity being conducted and the organisation under which the CHW was operating. For community sensitisation and mobilisation activities, some CHWs reported that they had received supervision from the NGO to which they were affiliated for MNCH activities, whilst others were recruited and supervised by new partners. As members of CWCs, CHWs received increased supervision under the auspices of the Social Mobilisation Platforms established in each prefecture and sub-prefecture. This supervision was conducted on a daily to weekly basis depending on the intensity of local disease transmission. In contrast, the supervision for CHWs working as contact tracers was more intensive in Dubréka, Forécariah and eventually in Kérouané and Macenta. They were required to complete detailed checklists for each contact they identified and reported daily to either their local health centre chief or WHO supervisor. As one CHW in Dubréka explained,

In doing our reports, we made sure that we went every morning to the houses where the cases were found, and with the checklist in our hands, we put the thermo-flash [contactless-thermometer] on the person and we recorded the temperature. Then in the evening, when the supervisors came, we gave them the report from our checklist and also took them to the suspected cases to assess the contact in their presence again.

According to prefecture-level stakeholders and CHWs, reporting and supervision for Ebola-related activities became comparatively more intensive than the supervision CHWs received for regular MNCH activities. Many CHWs reported satisfaction with the increased levels of supervision they received during the later stages of the outbreak. Whilst mechanisms for quality assurance were clearly built into contact tracing supervision, particularly as described by CHWs in Dubréka and Forécariah, robust strategies for quality assurance were less apparent for CHWs engaged in case finding and community sensitisation activities across all four prefectures.

3.8 Monitoring and evaluation, and health information systems

Reporting systems were strengthened throughout the course of the response, and monitoring frameworks were established under each pillar. Under the social mobilisation pillar, UNICEF recruited the independent NGO CENAFOD in November 2014 to provide technical support on the monitoring of the social mobilisation activities (including CWC activities) and evaluate their impact on community behaviour and Ebola transmission. In terms of routine reporting, CHWs reported their activities (on a daily or weekly basis) and summary reports were collated and fed into the social mobilisation pillar’s various monitoring streams: the first for ‘capacity’ (detailing, for example, the number of staff recruited and the volume of supplies delivered to the field), and the second to document the actual implementation of activities (including, for example, how many households had been visited and how many hand washing kits had been distributed).

According to UNICEF representatives, the communication and monitoring systems that were established ‘from the ground up’ for social mobilisation were used in partner coordination meetings to assess the effectiveness of current strategies and provide direction for changes necessary. As a representative from UNICEF explained,

Several times we used the reports to present to the NECC to say look, for example, based on the data, the composition of safe burial teams needs to be changed or we need to establish better pre-training for people recruited to perform this particular duty because they are having some problems that need to be addressed.
We face many challenges as CHWs. Firstly, motivation is a problem because we all have families. We have children and other family members and we all work as famers to support them. As CHWs, we are required to abandon our farming activities to go to the field to do our activities, and that can be very difficult. If we were paid as CHWs, we could leave our farming responsibilities behind and really commit ourselves fully to do the CHW work.

Another challenge that we face is drug shortages for the treatment of pneumonia and diarrhoea. We are pleading to the government to help us have the supply of those drugs because they help the community so much, and this motivates us to continue this work.

We also need motorbikes to facilitate our movements because some villages we cover are so far away that a bicycle cannot reach in time to do sensitisation activities or before a sick child’s condition becomes so bad that it may be too late.

CHW, Dubréka
4. Community health workers and post-Ebola community-based MNCH programming

This chapter analyses community-based MNCH programming and the work of CHWs during the transition and recovery phase after the end of the Ebola outbreak. It adopts the same structure as the previous chapters, arranging the analysis around the eight iCCM benchmarking components. It should be noted that the timeframe for implementing iCCM and related programming was different in each prefecture.

4.1 Coordination and policy

The post-Ebola recovery period has seen a renewed political focus on strengthening Guinea’s health system with a specific focus on the community health system. According to the Secretary General of the MoH, the 2017 health budget will be 8.5% of government’s annual budget (increased from 4.2% in 2016). Core objectives outlined in the MoH’s National Health Development Plan (2015-2024) included increasing equitable access to essential healthcare nationally, improving community-based disease surveillance and strengthening community-based emergency-preparedness. CHWs were recognised as well positioned to play an integral role in achieving these objectives. To guide community health system strengthening the MoH initiated the revision of National Community Health Policy (2016/2017) (RNCHP) and the development of the National Strategic Plan for Community Health (NSPCH, to be validated in 2017). These documents sought to address a number of historical weaknesses in the community health system, many of which were highlighted and/or exacerbated by the Ebola outbreak. The RNCHP and NSPCH should serve as a reference framework for all community health actors, and key aims included increasing the number and equitable distribution of CHWs and coverage of the services they offer; improving coordination and harmonisation of community health programming; improving training, reporting and supervision of CHWs; addressing weak supply chains; improving and extending monitoring and evaluation of community health activities; improving and standardising CHW incentives; increasing meaningful community participation in the planning, development and governance of the community health system; and ensuring sustainability of community health services.

While much of the substantive content in the 2012 NCHP was carried forwards into the RNCHP, experiences during the Ebola outbreak did influence some aspects of policy. It is notable that the RNCHP places particular focus on improving community participation through a planned strategic approach to establish or re-activate VHCs and CHHs, and to strengthen multilateral engagement between CHHs, health facilities and municipal governance structures. At the time of writing, however, how challenges linked to poor VHC motivation would be addressed to ensure long-term sustainability remained unclear. The RNCHP also expanded the broad definitions of community health interventions. While health promotion and prevention activities remain core components of community health services, the RNCHP gave additional emphasis to community-based treatment of simple forms of diseases (including malaria, diarrhoea and pneumonia) and community-based epidemiological surveillance.

In line with the RNCHP, which stated that as a cadre, CHWs should be ‘versatile to reduce the risk of verticality or specialisation’, a MoH representative concluded, ‘In the new NCHP, the same CHWs must be used for all activities. All CHWs will be able to treat malaria and diarrhoea, do family planning, nutrition, vaccinations etc.’. Yet despite this, there was no clear indication in the strategy documents that the vertical nature of community health programming would change post-Ebola or how harmonisation and standardisation would be operationalised. Although MoH representatives engaged in this study suggested that a specific package of priority community health activities was being developed (including protocols, tools and operating procedures), the package was not outlined in the RNCHP or the NSPCH and it remained unclear whether all CHWs would be required to implement a minimum package of activities which would ensure a uniform set of community health services nationally. It was suggested that one challenge to formally implementing a broad
portfolio of CHW activities may be linked to securing external funding, and there was a sense that donors may not be able or prepared to fund broader CHW programmes if they were not specifically aligned to their own, at times, narrower operational objectives (as further discussed in the following section). As one MoH stakeholder explained, ‘CHWs are used to being paid and supported by NGOs, and if the NGOs leave, nobody will be here to pay them’. They continued to explain that partners would still be permitted to implement specific CHW activities, but that all partners would use the same group of CHWs. Consequently each CHW would be likely to work for multiple different implementing partners, which would necessitate increased coordination and transparency and potentially impose heavier administrative burdens on CHWs.

In terms of improved coordination between the MoH, PDH and the numerous partners that implemented community health interventions, the RNCHP outlined plans to establish ‘steering committees’ at community-, prefecture-, regional- and national-levels. These committees were intended to assume authority over all community health activities at their respective levels and function as platforms for communication and networking between community health actors, although at the time of the study the degree to which these structures had been set up or were functional was unclear. A representative from the MoH confirmed that increased emphasis had been placed on partners to consult with the National Directorate of Preventative and Community Health (NDPCH), concluding ‘Many NGOs didn’t consult with us before starting their activities in the prefectures. Now NGOs must report first to our department before implementing their activities’. Yet this was contradicted by NGO representatives who asserted, ‘NGOs are still just going into communities and doing what they like without any harmonisation of activities or principles’.

Whilst partners were widely supportive of CHW programme harmonisation, they were sceptical about how this would be achieved given existing policy and funding structures, limited resources and perceived weak leadership for community health within the NDPCH and PDHs. At the prefecture-level, for example, there remained limited resources allocated to community health management. Even when PDHs employed a CHW focal person dedicated to CHW programming, these staff were under-resourced to manage, supervise and monitor all the CHW activities in their prefectures. At the time of the study, it appeared that many prefectures still did not have a CHW focal person dedicated to CHW programming.

Partners also appeared frustrated that the more robust coordination structures that had been implemented during Ebola had not been maintained for the coordination of community health system activities during the recovery phase. Significant concerns were raised by stakeholders at all levels about the capacity for future emergency preparedness given the lack of sustainable health system capacity that was built during the Ebola outbreak. Concern was also expressed about the community based surveillance (CBS) system, which, although strengthened during the response, had quickly reverted to being weak and less rigorous. Their concerns proved to be valid, for the PDH admitted that in Kérouané at the time of the study, a cluster of 12 child deaths from a diarrhoeal illness in a single village over a brief time period was not promptly reported to the health authorities, nor through the correct channels. National- and prefecture-level stakeholders agreed that to improve the community component of any future emergency response, it was critical that an emergency preparedness plan that clearly delineated the roles of CHWs and strengthened the communication structures with the health system be formulated. One PDH representative in Dubréka concluded, ‘I think the best method is to fortify the channel of communication and the flow of information. The information is supposed to flow efficiently from the community via the health structures all the way up to the MoH’.

Post-Ebola, UNICEF continued to focus on scaling-up iCCM programming across Guinea and at the time of the study had supported selected implementing partners in 27 of the country’s 38 health districts to train groups of CHWs on iCCM for malaria, diarrhoea and pneumonia in their communities. The box below summarises key iCCM activities that were implemented in the study’s four focal prefectures after the end of the Ebola outbreak. The broader MNCH activities that were implemented prior to Ebola, as outlined in the box in Chapter 1, were also reinstated.
iCCM community-based MNCH programming per prefecture post-Ebola

**Dubréka**
In scaling up their iCCM programme for simple malaria, diarrhoea, pneumonia, RTI recruited an additional 38 CHWs to supplement the 42 CHWs that been active in iCCM during Ebola. CHWs reported that they had not received iCCM drugs (other than ACT) since their initial three-month supply provided by UNICEF. At the time of the study, therefore, they were not providing treatment for pneumonia or diarrhoea and were instead referring all such patients to the health facility.

**Forécariah**
CHWs working with RTI and CJMAD continued to provide iCCM after Ebola, although drug shortages and stock-outs limited the capacity of some CHWs to provide community-based treatment for pneumonia and diarrhoea.

**Macenta**
PLAN (with AACG) continued to work with 170 CHWs to provide iCCM in ‘hard to reach’ communities across the prefecture. Again, CHWs reported frequent drug stock-outs of amoxicillin, ORS, zinc, paracetamol and ACT. Consequently, at the time of the study, some CHWs were referring all sick children to their local health facility. Some continued to provide sensitisation on family planning but again due to drug shortages, they were not able to offer contraceptives at the community-level.

**Kérouané**
In April 2016, PLAN Guinea took over PSI’s CCM programme with 80 CHWs and contracted the local NGO FUDD to implement it. At the time of the study, CHWs reported they were not providing treatment for malaria due to drug stock-outs. A proportion of CHWs in Kérouané also reported that they were providing CCM for diarrhoea possibly under Save the Children USA.

Roles of other community health actors

*Traditional birth attendants*

Prefecture-level stakeholders and some TBAs reported that rates of TBA deliveries had decreased in the hardest hit areas since the Ebola outbreak had ended, but suggested that the number of TBA deliveries at home or at under-resourced health posts remained high. One health worker in Dubréka estimated that 70% of deliveries in the catchment area of their health centre were performed by TBAs. The Ebola response had little long-term effect on the challenges women faced in accessing and utilising quality maternal health services and both barriers to health facility attendance (including distance; availability of emergency transport; direct and indirect costs associated with seeking care; availability of skilled health workers, safe water, supplies and drugs at facilities), and drivers for TBA services (including the perception that TBAs provided more caring and dignified treatment than health workers; preference for delivery with a familiar attendant) remained constant.

Similarly, TBA engagement in promoting ANC visits and facility-based deliveries post-Ebola was largely unchanged and remained influenced by factors including whether a TBA was attached to a health facility; the distance to the nearest health facility; the incentive they received for performing home deliveries; and to some extent, how active the local CHWs were in sensitising TBAs and the community on facility-based deliveries and ‘policing’ home deliveries. A number of TBAs in Kérouané and Dubréka who participated in the study were attached to health facilities located in or close to the their villages and reported they had reverted to referring pregnant women to the health facility for ANC and deliveries after Ebola, although they noted that home deliveries still occurred ‘after-hours’. TBAs in Macenta, Forécariah and Kérouané whose villages were located a
greater distance from the nearest health facility were much less active in promoting facility-based deliveries and the home deliveries assisted by TBAs were common. Since the Ebola outbreak, CHWs in Dubréka and Forécariah appeared to have adopted a firmer stance against home deliveries in their communities. A number of CHWs concluded that they did not ‘authorise’ TBAs to perform home deliveries in their villages since they were not trained to perform such activities. These CHWs tended not to work collaboratively with TBAs and confirmed their conflicting practices caused tension. Some suggested that TBAs were motivated to actively discourage facility-based deliveries due to the material gains they received from performing home deliveries.

Despite this, many stakeholders, including community leaders, some CHWs, and representatives from NGOs and PDHs continued to accept home deliveries as the only realistic or pragmatic option for pregnant women living in remote areas. As one local government representative in Kérouané stated, ‘In communities where there isn’t a health post or health centre, it is an obligation that the women will deliver in the hands of the TBA’. CHWs in one focus group discussion in Kérouané asserted that because TBAs in their area had been trained (albeit briefly and some years ago), home deliveries were both acceptable and safe. Several prefecture-level stakeholders suggested that in order to reduce the rate of home deliveries, TBAs should be recognised as a formal cadre within the health system and like CHWs, be given formal training, supervision, incentives and a reporting structure. Community members also expressed the desire for their TBA to be supported by the formal health system, yet their preference was for TBAs to be obstetrically trained to continue deliveries safely at the community level. Similarly, in discussing their role post-Ebola, many TBAs requested that they be trained and supplied with equipment so that they could safely attend labouring women in their own communities.

*Traditional healers*

At the time of the study, the decree prohibiting the use of traditional healers remained active. Some prefecture-level stakeholders suggested that the decree and intensive sensitisation during Ebola had reduced the demand for traditional healers, but others maintained that care seeking from traditional healers remained common and widespread. A small number of traditional healers who participated in the study reported that they continued to refer patients to CHWs or health facilities, but the majority had returned to their regular practices. Traditional healers remained confident in their ability to treat a range of conditions and many caregivers continued to perceive traditional healers as a frontline service provider. As an NGO representative in Kérouané concluded, ‘Africa is still Africa, so when somebody is sick, the first person they think to go to is the traditional healer’. A prefecture-level stakeholder in Dubréka expressed frustration that traditional healers were permitted to advertise their services publicly (for example, on the radio) thereby curtailing the impact of sensitisation efforts by CHWs, yet in Kérouané, one group of CHWs suggested that certain conditions were indeed the prerogative of traditional healers concluding, ‘According to the African custom, the witchcraft doctor may be sending a sickness on the child, this kind of sickness is treated by the traditional healers. The fractures also, are traditionally treated’.

Marginalisation during the Ebola response and the ongoing decree had contributed to the dissatisfaction felt by traditional healers, many of whom perceived that they were excluded from the formal health system and prevented from treating patients by health workers. According to traditional healers, health workers were failing to meet obligations made under a working agreement from before Ebola. Under this agreement, patients not curable by biomedicine in the formal health system were supposed to be referred (or referred back) to the traditional healer for care. Because of the perception that this agreement had been broken, traditional healers in Macenta, for example, had reverted to treating patients without consulting CHWs or health workers first. In Forécariah, CHWs confirmed that traditional healers were again treating patients without first consulting them, and noted that this caused delayed presentation such that a patient may no
longer be treatable at the community-level and onward referral further undermined the services that could have been provided by CHWs. One CHW explained, ‘The spirit of jealousy is really between us [the traditional healers and the CHWs] because sometimes they might hold onto some patients that they may not be able to treat, and when that patient finally comes to us, it will be too late and we will have to transfer the patient’. Traditional healers maintained that they complemented the efforts of health workers and CHWs by offering treatment for conditions not suited to biomedical interventions, including psychological illness.

Prefecture-level stakeholders conveyed a mostly negative attitude towards traditional healers after the Ebola outbreak. Some recognised that because community members were likely to continue seeking care from traditional healers, it was necessary to engage healers and give them ongoing IPC training. Little consideration was given, however, about how to improve collaboration or foster more positive relations. Representatives from the Traditional Healer Associations indicated a firm desire to be recognised as a complementary health service provider alongside the formal health system and expressed their reluctance to engage in any future emergency response without supplied with significant financial incentives and the appropriate equipment to do so.

Private clinics and pharmacies

Although private clinics and pharmacies continued to be utilised after Ebola, some prefecture-level stakeholders suggested that, as a result of the intensified sensitisation on using public health facilities during the outbreak, rates of utilisation had decreased. An NGO representative in Macenta reported,

| Before the outbreak in this community the private clinics were the most populated and visited by the community for two reasons. The first was that the people who come to the health centres had one mentality, that was once they came, no matter the number of people waiting before them, health workers should abandon all of the others and serve them first because they’re in a hurry. Since they can’t have this from the health centres, they preferred to go to the private clinics or to the pharmacy where they would just tell them that they had a headache, and without conducting any test, the people in the pharmacy would just give the patient some tablets to go and try. But with the coming of Ebola, the eyes of the people re now opened towards the use of the health centres because they now know that the delay in receiving treatment is not done to prevent anybody from having treatment, but that people are only taken by the order of arrival. Proper check-ups are being done on patients to really identify the problem or the sickness before the treatment is administered. Hence, the coming of Ebola was a bad thing, but also a good thing, for the awareness generated in the communities towards the use of the health centres. |

Committees of Health and Hygiene, and Village Health Committees

As part of the recovery process, renewed support was given for the formation and (re)-activation of CHHs and VHCs in an effort to ensure that communities have a role in the planning, implementation, financing and monitoring of community health initiatives and to build community resilience for future emergencies. Both the RNCHP and the NSPCH reflect this focus. These policy documents acknowledge that in the past, CHHs and VHCs had not been well engaged in the resolution of community health problems due to weak regulatory structures, limited local governance and supervision, unclear responsibilities and a lack of motivation. In 2015, however, the MoH, with the technical support of partners and in line with national policy, began supporting activities to establish (or strengthen) CHHs that were intended to develop, implement and monitor effective community health plans which reflected the views and needs of communities. According to documents for the 2016 UNICEF supported ‘Project to Support the Rehabilitation of Health Centres in Guinea’s Forest Region’ (UNICEF 2016b), the CHH were comprised of a president; a vice-president (a local civil society representative);
two members responsible for community mobilisation (a religious leader and a women’s leader); three members responsible for the promotion of community-based services; a treasurer in charge of managing the health centre finances; and the health centre chief to provide technical oversight. The CHH was under the co-management of the MoH and the Ministry of Decentralisation represented at the local level by local council structures. The intended roles of the CHH are outlined in the box below (UNICEF 2016b).

**Key roles of the CHH**

- Regularly report on the epidemiological profile of diseases in the local community
- Ensure social mobilisation on health promotion, prevention and curative services
- Recruit community stakeholders, and supervise and evaluate their activities
- Supervise the health centre’s technical staff
- Facilitate the mobilisation of resources for health centre maintenance
- Advocate for the renewal and maintenance of equipment and logistics for health
- Facilitate the planning, supervision, monitoring all of the activities at the health centre and in the community
- Develop and manage the budget of the health centre
- Manage the health commodities, equipment, and the logistics
- Monitor and supervise:
  - The supply, management, consumption and purchasing of drugs and equipment for the health centre
  - Community distribution of drugs and health commodities (eg ITNs and condoms)
  - Immunisation services
  - Pre and postnatal services
  - Health worker attendance
  - Financial resources and budget implementation
  - The treatment of clients at the health centre
  - Adherence to drug pricing policies
  - Maintenance of health centre hygiene standards
- Organise the regular reports of supervision and monitoring
- Facilitate and coordinate all local initiatives aimed at improving access and quality of care
- Present a quarterly situation analysis of the health centre to the community.
- Organise activities that promote sanitation and hygiene at the community, family and individual levels.
- Ensure harmonious relationships are maintained between the health centre and the administrative and political authorities and the community and health workers.

It was intended that the CHH, with the health centre staff, adopt a participatory approach to develop and implement monitoring and evaluation of the health centre and community health activities. Evaluations were to be conducted biannually. Results of the evaluations were to be shared with the local councils and communities and the CHH were responsible for working in collaboration with communities to identify and implement actions needed to address problems arising. CHHs were expected to engage the community in the planning, implementation and monitoring of community health activities through community meetings organised to facilitate the two-way flow of opinions and ideas.
In general, community members engaged in the study indicated limited awareness of health centre-based CHHs and did not appear to distinguish between CWCs established during Ebola, and VHCs. In many areas, the CWCs had ceased to operate after the end of the Ebola outbreak since incentives and supervision had stopped, and their Ebola-related mandate had not been updated for the non-emergency context. In Dubréka and Macenta, however, communities reported their CWC had remained active and transitioned into the role of a VHC. As a community leader in Dubréka explained,

**Our CWC is still active. What you have to know is that the roles are shared. Every Friday, religious leaders will pass a message in the mosque to announce how we’re supposed to protect ourselves. They will talk about how to prevent ourselves from contracting sicknesses, especially during this time of the rainy season, be it Ebola, malaria, parasitic sicknesses for children that are playing in water. For those of us who are in the domain of education, before the closing of schools we pass the information and even demonstrate dramas to show how to avoid the sicknesses. Moreover, we go to the families to provide door-to-door information and sensitisation. Because it is the rainy season now, the problem we face in doing house-to-house sensitisation is that we don’t have rain kits. The washing of hands is respected here and even now we have the sanitary kits, we have soap, we have chlorine and so on. So all of this is to encourage the people.**

### 4.2 Costing and financing

Universal access to healthcare was documented as a guiding principle in both the RNCHP and NSPCH. The RNCHP outlined that financing for community health services should be mobilised by multiple sources including the government, development partners, the private sector and communities themselves. Whilst the government was a named funding source, no details were provided on the extent of the government’s financial commitment or how it would be operationalised. In relation to community-level commitment, however, the policy stated that the community were expected to ‘Allocate 15% of their budget to the resolution of health problems in their communities’. At the time of the study, CHWs and their programmatic work remained entirely funded by external agencies and depending on the programme, communities contributed through payment for medicines to treat diarrhoea and pneumonia. Both national- and prefecture-level stakeholders expressed concern about funding priorities and the efficiency and sustainability of existing funding structures. For example, a large primary healthcare project funded by the World Bank that included the utilisation of CHWs recruited during Ebola for community-based MNCH services was officially launched in June 2016. Implementation was planned in nine prefectures across the two regions of Faranah and Labe (not included in this study) and would pay CHWs USD 60 per month over five year. Stakeholders remained sceptical about the project’s sustainability and scalability.

One NGO representative suggested that given limited resources, partner spending on ‘community structure development’ (for example VHCs) would have a greater impact on community health if funds were directly allocated to CHW programmes. Another reported the need to increase funds available specifically for CHW programme implementation, and reduce administrative funds that led to costs being lost to ‘intermediary’ organisations. Stakeholders at all levels advocated for an increase in routine monthly payments to CHWs (discussed further below). At the time of the study, the MoH did not have any plans to establish a designated budget line specifically for community health services, yet many national- and prefecture-level stakeholders supported the idea in principle. This was largely driven by their skepticism that integration of all essential community health activities could be achieved under the existing external funding model, yet participants questioned the viability of paying CHWs through the government payroll, in terms of financial sustainability and logistics. As one national-level stakeholder explained,

**The problem is that in Guinea. All CHW activities are supported by partners. If the government was funding CHWs it would be very easy. They could say ‘This is what the national package of services to be provided by CHWs is, and here is the money to do it’. But it’s not working like that. For example, RTI is funded by PSI, and if**
they want RTI to do CCM for malaria, then they will give RTI the money for malaria. I don’t think they would allow RTI to take that money to train CHWs on how to do TB as well.

4.3 Human resource management

As Guinea transitioned into the post-Ebola recovery period, Ebola-related community-level activities were scaled back and implementing partners started to again focus on regular CHW MNCH programming. Although the CHW workforce swelled during the response because of the personnel recruited for Ebola-specific activities, many did not provide MNCH services, and those who did, did not provide a standard package of services. While some ‘new’ CHWs that were recruited into Ebola-related roles were made redundant after the outbreak was declared over (December 2015), those who had been recruited to provide iCCM continued their activities post-Ebola and the iCCM programme expanded to cover 27 prefectures with selected implementing partners. A new national community-based surveillance (CBS) programme (discussed in detail below) was rolled out by the MoH. This was supported by a range of partners, and utilised CHWs recruited before, during and after Ebola. In communities where CHWs were already implementing MNCH activities, they had CBS added to their package of services. In communities without a CHW previously providing MNCH services, CHWs recruited during or after Ebola were engaged to begin providing CBS only within their community. At the time of the study, there was no clear harmonisation between these programmes. In Macenta, for example, whilst only a small proportion of existing CHWs (both those recruited before and some during Ebola) worked with AACG to provide iCCM in their communities, the PDH reported that they had increased their existing CHW workforce from 463 at the end of the outbreak to 633 at the time of the study for the specific purpose of training them on CBS.

Despite expansion of the CHW workforce, the MoH continued to report a national shortage of CHWs for effective and equitable coverage of MNCH services, particularly iCCM post-Ebola. Of those CHWs who were actively providing MNCH services, stakeholders suggested that many were responsible for covering between four and 24 villages over a 10km area. The distance, plus transport issues and limited resources curtailed the level of service provision they could offer. In line with the situation before Ebola, the more rural communities, particularly those located at the periphery of health facility catchment areas, were likely to have less service coverage.

The CHW selection criteria outlined in the RNCHP remain largely unchanged from the 2012 NCHP, although it stipulated that the ability to both read and write in French was a requirement and removed Arabic as an alternative. Prefecture-level stakeholders admitted that it had not always been possible to recruit candidates who complied with the full selection criteria prior to Ebola, and that during the outbreak, many had been selected that did not meet the criteria, partly because of the fraught nature of the response and the human resource needs. Stakeholders at all levels expressed concern that many of the existing CHWs were illiterate and lacked the capacity to safely and effectively provide a complete package of community health services, including iCCM.

Training

The Ebola response introduced new skill sets to many CHWs including IPC measures, CBS and iCCM, and efforts were made to maintain and capitalise on these competencies during the recovery period. Surveillance skills had been further developed through the MoH’s national community-based surveillance programme launched in early 2016. Supported by ten partners including IOM and IMC, the key aim of the programme was to improve community-level detection, reporting and rapid response for a set of key notifiable diseases. Prefecture-level stakeholders in Dubréka, Forécariah and Macenta confirmed that IMC or IOM had given CHWs
in their prefectures expanded training on CBS as part of this programme. In Kérouané, however, CHWs reported that they had not yet been trained on CBS post-Ebola, and prefecture-level stakeholders voiced concerns about their weak CBS system.

As discussed above, UNICEF continued to support implementing partners to expand iCCM coverage to 27 prefectures post-Ebola. Select groups of CHWs in each prefecture were trained using the standardised five-day iCCM training programme developed by the MoH with technical support from UNICEF, the WHO and the USAID flagship Maternal and Child Health Integrated Programme MCHIP. Integrated into the training was an adjusted no-touch iCCM protocol to be adopted during any future Ebola outbreak. CHWs trained in iCCM in 2015 during the outbreak in Dubréka, Forécariah and Macenta reported they had not received any refresher training on iCCM since Ebola had ended, although in Dubréka an additional 38 CHWs had been trained on iCCM post-Ebola, bringing the prefecture total to 80. In Kérouané, FUDP reported to have provided old CHWs engaged in their malaria CCM programme several three-day refresher trainings since the end of the outbreak.

As highlighted above, stakeholders at all levels questioned the capacity of CHWs and suggested that overall, their training was insufficient and that refresher trainings were not provided regularly enough. The low education level of some CHWs was also raised as a concern. As one prefecture representative concluded, ‘When we go in the field to do evaluation and supervision, out of ten CHWs, we’ll observe that only six will live up to the tasks they are responsible for and the four others would not master their work’. CHWs in Dubréka and Forécariah also discussed other concerns, explaining that since starting to provide limited community-based treatment, communities tended to perceive them as ‘doctors’. This had led to expectations that CHWs would provide a full range of services at the community. CHWs were frustrated that despite the evident demand, they were unable to meet community expectations because of their limited training, and this had the potential to cause friction and resentment from their client base. As one CHW in Dubréka concluded, ‘People come here and expect to be treated for all kinds of conditions and if you’re not qualified to do the work, what can you do?’.

The revised NCHP indicated that all CHWs would be required to complete core training on health education and communication that would be supplemented by additional training modules focusing on specific community-level interventions (e.g. those interventions being rolled out by the implementing partner to whom the CHW was affiliated). It was not clear how training would be harmonised or coordinated, and as one national-level NGO representative explained, ‘We have our own standardised trainings for CHWs depending on the diseases, but we do not have one standardised training covering a package of services for all the community health workers’. The NCHP also did not stipulate whether refresher trainings would be required. At the time of the study, the MoH suggested that standardised CHW training modules were being developed that included new content, structure and training methods. The MoH confirmed that NGOs would be required to adhere to these standard training modules for the implementation of all CHW programmes in Guinea, and only NGOs intending to implement ‘novel’ interventions for which the MoH had not developed standardised training would be exempt.

**Incentives**

As in both Sierra Leone and Liberia, the issue of remuneration for CHWs remains one of the most hotly debated topics discussed by stakeholders at all levels in Guinea. At the end of the Ebola response, the funding structures reverted to ‘normal’ or non-emergency mechanisms. Many implementing partners scaled back the number of CHWs they engaged, and it was not possible for them or the government to sustain the inflated rates of pay that had been offered to many during the outbreak. The heightened expectation that any kind of community activity deserved payment was perpetuated, and was evident even during the study as several community members were reluctant to participate without remuneration.
Many CHWs were highly articulate about their dissatisfaction with having to return to volunteerism and face similar financial challenges to those experienced prior to Ebola, particularly as many concluded that to fulfil their CHW responsibilities, they often had to sacrifice other paid work and pay for out-of-pocket expenses, such as transport. In prefectures where iCCM was being implemented, stakeholders regarded that being in a position to sell antibiotics, ORS and zinc was a form of financial motivation for CHWs, yet the profits that CHWs made were minimal, particularly as they frequently did not have stocks to sell (discussed further below).

CHWs frequently indicated that their services were not sustainable without increased financial incentive. As one CHW in Dubréka concluded, ‘A time will come when we have to first take care of our families and make sure they are fed and survive, so we will one day see someone dying and we will not attend to the person because we will be attending to our families’. The vast majority of stakeholders who participated in the study, including community members, also advocated for increasing the financial incentives offered to CHWs. NGO representatives confirmed that it was difficult to motivate CHWs, expect them to perform to a high standard or be accountable without providing higher financial incentives. In Kérouané, PLAN and FUDP had found it necessary in October 2015 to increase their CHWs’ monthly incentive from the pre-Ebola rate of GNF 60,000 (approximately USD 6.50) to between GNF 80,000 and 100,000 (approximately USD 8.70 to 10.90) in an attempt to overcome their post-Ebola demotivation and subsequent decline in activity level. The increase was insufficient, however, to prevent the resignation of some CHWs and was seen to be indicative of the dissatisfaction felt by CHWs across Guinea who perceived themselves to be disenfranchised. Their sense of being under-valued was both retrospective and prospective as many did not feel they had been properly thanked or supported for their contribution to the response, and were not prepared to accept lower wages going forwards. Some stakeholders thought it was ‘fair’ to increase CHW incentives (in terms of their marketable wage), whilst other suggested that it would have ‘symbolic’ justification, emphasising to CHWs that their government and communities appreciated their work. Notably, the 2012 NCHP recommended a standard monthly financial incentive of GNF 100,000 (approximately USD 10.90) while the RNCHP makes no mention of a specific standard sum. A number of prefecture-level stakeholders thought that without increased financial incentives, there was a risk that CHWs may start charging for ACT and inflate the price of the other medication they sold to communities.

In addition to the lack of monetary incentives, CHWs were frustrated by the lack of resources and equipment to conduct their key activities effectively. Most CHWs engaged in the study confirmed that they had been provided with basic materials including ARI timers, MUAC measuring tapes and patient registers, yet they did not have a reliable drug supply, IPC materials, effective means of transport, rain gear and boots, torches, bags, branded T-shirts or ID badges. CHWs across all four prefectures repeatedly emphasised the importance of creating an enabling work environment as a motivating force. Some expressed a desire for other non-financial motivation such as certificates of recognition (for their service and/or trainings completed) or scholarships to facilitate career development. As one CHW in Dubréka commented, ‘We’re supposed to have certificates to show that we have done the training and that we’re not at the same level with the others in the community, because we have learned something that they have not’. Overall, it was clear that Ebola had triggered a new focus on CHW incentives and, as one prefecture-level stakeholder in Dubréka concluded,

Our experience from Ebola showed that when CHWs are motivated with stipend or allowances, they are more available and willing. We can provide bicycles, but he cannot buy a bag of rice to feed his family with a bicycle. So I think the financial motivation has to be looked at very carefully.

The RNCHP highlighted that the financial and non-financial motivation of CHWs (and their supervisors) was essential for the sustainability of community health programmes and CHW retention. A key MoH representative confirmed that the government intended to implement a policy requiring all CHWs be paid a standard monthly payment of USD 60 (approximately GNF 550,000), but provided no details about the
minimum package of services CHWs were expected to deliver for receipt of this payment. It was also unclear how this payment would be operationalised in terms of logistics and sustainable funding sources. Project representatives confirmed that the World Bank would be financing monthly payments of USD 60 to CHWs as part of their primary healthcare strengthening programme across nine prefectures, but at the time of the study, other implementing partners asserted that they were continuing to pay CHWs between GNF 90,000 and 100,000 (approximately USD 9.80-10.90). Although many stakeholders favoured increasing financial incentives for CHWs so that they were formally a ‘paid’ cadre of frontline health workers, concerns remained over the financial feasibility of a standard USD 60 USD monthly payment.

4.4 Supply chain management

Whilst Ebola had resulted in CHWs being supplied with useful equipment including motorbikes, cell phones and contactless thermometers, much of this was reportedly repatriated after the Ebola response ended. NGOs expressed frustration over this, particularly since even basic equipment like thermometers were also taken away, and the process demoralised CHWs. Similarly, the significant influx of resources during the outbreak had little impact on supply chain management associated with MNCH, or specifically on the distribution of iCCM drugs (antibiotics, ORS, zinc and paracetamol) to CHWs. The majority of stakeholders concluded that in the post-Ebola era, shortages and stock-outs remained key challenges in service provision, as they had been pre and during the Ebola outbreak. As before, CHWs continued to distribute ACTs to the community free of charge having obtained them from their health centre chief, but community members were required to purchase iCCM drugs including antibiotics, zinc, ORS from the CHWs (discussed further below). Although ACTs (but not always RDTs) were available to CHWs in most prefectures (except in Kérouané where CHWs reported a stock-out of ACT), prolonged stock-outs of antibiotics, ORS and zinc was reported to be the key reason that CHWs, particularly in Macenta, were not providing treatment for diarrhoea and pneumonia at the community-level. CHWs in Kérouané who participated in the study claimed that they could be without ACT and ORS for three to six months at a time, and in Macenta, CHWs confirmed that they had not received any iCCM drugs, including ACT, for six months.

Whilst health centre chiefs often cited drug stock-outs as the reason they could not supply CHWs, some national-level stakeholders and prefecture-level stakeholders in Macenta were concerned that health centres had antibiotics, ORS and zinc in stock but were not releasing them to CHWs. To a large extent, health centres continued to rely on the profit made from drug sales to cover running costs, including staff salaries as healthcare workers were not usually on the government payroll. It was suggested that health centre chiefs were reluctant to sell the medication to their CHWs because the sale price in the community was lower than that charged by the health centre and if communities sought care from CHWs rather than health centres, the livelihood of the facility-based staff would be threatened. Interestingly, CHWs had similar concerns, suggesting that, although it was unregulated, caregivers could purchase the drugs more cheaply in the market and could therefore bypass their services too.

While CHWs appreciated the financial benefit of selling iCCM drugs in their communities, they were concerned that this strategy was affecting caregiver perceptions of CHWs and utilisation of their services. In Macenta caregivers could reportedly purchase these drugs (although unregulated) more cheaply in the market and therefore bypassed CHW services. In Forécariah, despite selling drugs at a lower price than private pharmacies, CHWs reported caregivers would ‘boycott’ CHWs in protest of having to pay for drugs at all, especially since ACTs were given to them free of charge. Highlighting the continuing distrust some community members had for CHWs, one CHW in Forécariah explained,

*We are really suffering with the pneumonia and diarrhoea drugs because they are to be sold in the community to the patients. But many of them are refusing to buy them from us, they prefer going to the pharmacy to buy*
it [even if it’s more] expensive. They think that we are just selling these drugs for our own interest, that these drugs are not meant to be sold to them, that they should be free of charge like malaria drugs. So many of them are not coming to us for those treatments.

Drug stock-outs continued to have a negative impact on communities’ perceptions about CHWs and the services they offered, and was frequently cited by caregivers as a determining factor in their decision to seek care from traditional healers or other informal providers. Community-level stakeholders emphasised that the lack of medicines held by both CHWs and local health facilities persistently caused delays in treating children under five. As one community leader in Kérouané concluded,

One of the greatest problems we face here is the lack of medication. Sometimes we go to the traditional healer and the treatment doesn’t work. Since the CHW has no drugs, we go to the health post. The health worker may be willing to offer the treatment, but the drugs aren’t available. So the patient lies waiting while the health worker takes his mother’s bike to get medication for the treatment. The waiting causes more harm to the patient because before the health worker returns the patient becomes more ill.

In considering the iCCM drug supply chain post-Ebola, multiple problems were reported by both national- and prefecture-level stakeholders. The ongoing absence of a specific budget line for the MoH to procure drugs or logistic support was considered a major problem, and reliance on donor funding for specific drugs on a programmatic basis raised concerns regarding long-term sustainability. Lengthy bureaucratic processes at the central level were reported to delay the release of drugs to the regions, and weak logistic support and poor road conditions further protracted transit times. A number of stakeholders also suggested that failure to fully decentralise drug supply management was a significant problem. There was no drug storage capacity at the prefecture-level resulting in drugs being held at the regional level, often great distances from health facilities. This negatively affected the responsiveness of the supply chain to facility-level demands. It was reported that some partners were directly supporting the development of iCCM supply chain logistics in an effort to overcome some of these challenges.

4.5 Service delivery and referral

As discussed, in the post-Ebola recovery phase NGOs in Dubréka, Forécariah and Macenta were implementing iCCM programmes for malaria, diarrhoea and pneumonia, supposedly under the supervision of the PDH, and UNICEF also intended to support the implementation of iCCM in Kérouané. Based on self-reporting their competencies, it was clear that CHWs who were providing iCCM had varied skill levels in terms of their knowledge and approach to assessment, diagnosis, treatment and referral of the three conditions. Most CHWs expressed confidence in knowing when it was necessary to refer a sick child to the nearest health facility although in one village in Dubréka, caregivers reported that ‘CHWs treat the sickness. No matter how severe the sickness is they will treat it. Some will come and see them [the child] so deteriorated at the point of death, but they can take care of them’.

Most higher-level stakeholders were generally supportive of CHW services, including iCCM, recognising that CHWs were closer to the community, often more accepted than more highly trained health workers who were not local, and were more likely to remain in their own (often remote) villages rather than seek employment elsewhere. Some stakeholders were concerned, however, not only with the technical proficiency of CHWs, but that they may be over-burdened with an unrealistic number of activities. These stakeholders emphasised the need for a clear and standard package of CHW services that prioritised certain interventions.

CHWs in Dubréka, Forécariah and Macenta reported that widespread drug stock-outs were preventing them from providing community-based treatment at the time of the study, particularly for diarrhoea and
pneumonia. They were forced to refer to health facilities patients who were actually suitable for community-based treatment. It was a constant source of frustration to CHWs that despite their training, the health system did not facilitate their provision of iCCM. In addition to the limited drug supply, CHWs reported that their large catchment areas and lack of mobility continued to limit their service delivery. They also faced persistent challenges relating to care-seeking behaviours. As one frustrated CHW in Dubréka stated, ‘If you think that the traditional healers are treating a child for an illness that you could treat, how do you work out that situation? A sick child has pneumonia and you have treatment for that and you know they don’t. How do you intervene in that situation?’.

When discussing care-seeking behaviours for childhood illness post-Ebola, caregivers reiterated the same determinants that had influenced their pathway of care prior to Ebola, including perception of illness type; knowledge of treatment sources, including CHW services; reliability, cost and trust in drug supply; issues of access (including distance and transport to point of service delivery); and direct and indirect costs associated with seeking care, including having to fund out-of-pocket expenses for the treatment of children under five. It was notable, however, that at the time of the study, communities in Forécariah, Dubréka and Macenta appeared less likely to consider CHWs an adequate alternative to having a health facility in their village staffed with technical agents. Caregivers often questioned whether CHWs had the technical capacity to provide essential MNCH services at the community level and suggested that they may be more effective working under the direct supervision of a skilled health worker. As one community leader in Forécariah concluded, ‘Without a health centre it will be difficult for the CHW alone to do all his work properly. He really needs to be assisted by a doctor’. Many community members highlighted that CHWs were not trained to provide maternal healthcare, and a number of caregivers in both Forécariah and Macenta requested that their CHWs be trained to provide ante- and post-natal care, skilled deliveries and family planning.

National- and prefecture-level stakeholders concluded that CHWs had played an integral role in continuing to rebuild community trust in health facilities during the post-Ebola recovery period, primarily through their persistent sensitisation on the benefits of utilising health facilities when sick or pregnant. Health centre chiefs reported that patient numbers had returned to normal pre-Ebola levels, and most caregivers confirmed that they would attempt to comply with CHW referrals. In one village in Forécariah, community members reported that pregnant women would not be accepted for treatment at the health centre without a referral slip from their CHW. According to some prefecture-level stakeholders, the Ebola outbreak and response had resulted in communities having a better understanding of the diagnostic process required before treatment is given, and therefore improved perceptions about the quality of services provided at health facilities. One caregiver in Kérouané stated, ‘We go to the health centre now because our doctors have started providing very good treatment and things have changed since the end of Ebola, so this is what made us to use the health centres again’.

Despite the willingness of many communities to utilise health facilities and comply with referrals in the post-Ebola period, it was evident that, as before the outbreak, supply-side issues continued to negatively influence demand. Whilst the government had committed resources to establishing a number of new health facilities post-Ebola, coverage remained inequitable and facilities were poorly resourced. As one CHW in Macenta asserted, ‘If you build the structure, but there is no equipment or technically trained staff working in it, it means nothing’. Of the health facilities visited as part of the study, many reported that they had insufficient numbers of adequately trained staff; that health workers were not regularly paid, resulting in poor motivation, absenteeism and high attrition rates; that there was a lack of basic infrastructure, including reliable sources of safe water and electricity; and that drug stock-outs were frequent.

As discussed above, as part of the post-Ebola focus on reinforcing health surveillance, 10 partners supported the National Ebola Coordination Committee and MoH to establish CBS systems for a set of key notifiable conditions (cholera, meningitis, yellow fever, measles, maternal and newborn tetanus, flaccid acute paralysis,
malaria, bloody diarrhoea, seasonal flu, maternal and newborn deaths), using CHWs across Guinea. This initiative was widely supported by national- and prefecture-level stakeholders given CHWs’ ‘watch-dog’ capacity and perceived effectiveness in conducting Ebola-specific CBS during the outbreak. At the time of this study, CHWs in Dubréka, Macenta and Forécariah reported that they had been trained to identify and report any suspected cases of Ebola and other epidemic diseases to their local health centre chief. At the time of the study, the training had occurred between three and six months previously, yet some CHWs were unable to list the diseases for surveillance. The most comprehensive account of their CBS duties was provided by a CHW in Macenta who had received tertiary-level education, but this level of detail was rarely articulated by other CHWs.

We’ve been trained to do surveillance on four different types of sicknesses: measles, polio, pneumonia, and malaria. In our surveillance, we also watch the movements of the community members, and whenever there is any case of death or any sickness in the community, we write it down. When somebody dies we have to enquire what the person died of. Also when a stranger comes in, we have to know where he/she came from, whether they are from a country with epidemics like the one we had. We need to report all that.

Higher-level stakeholders who participated in the study suggested that the stigmatisation of CHWs by communities that had developed during the outbreak had largely resolved in most areas. In some villages, participants expressed gratitude for their CHWs as they had come to appreciate the efforts made by CHWs to protect them during the Ebola outbreak. Many CHWs reported that utilisation of their MNCH services had increased since the end of the Ebola outbreak, particularly for the treatment of malaria, but CHWs in Kérourané and Macenta, attributed a decline in care seeking for CCM of malaria in their prefectures to increased utilisation of ITNs. A small number of CHWs described ongoing difficulties, mostly in communities greatly affected by Ebola. During the study, this was particularly evident in Dubréka. In one village, the health post was still referred to as ‘The Ebola Centre’ and the CHW had been forced to curtail his activities because he was still marginalised by the community. In another, the CHW concluded, ‘Even now when I go to villages to deliver sensitisation, in those villages where there were Ebola victims, they don’t receive me very well’. In Forécariah CHWs also reported that communities continued to express mistrust towards them, explaining, ‘When we come here for meetings with the town chief, after the meeting people will say that we have been given money to come and kill them. Or when we give the drugs, they will say that we have brought the medicines to infect them in their communities [again]’. It was notable that in Dubréka and Kérourané, some members of Ebola-affected communities continued to deny that there had been cases of Ebola in their villages, indicating significant stigma was still attached to Ebola and Ebola response workers (including CHWs).

4.6 Communication and social mobilisation

As part of the MoH’s plan to harmonise community health activities nationally, the RNCHP and NSPCH outline the intention to develop an integrated national plan of communication in community health. While the policy documents confirmed that water, hygiene and sanitation would be covered in this communication plan, in was not clear what other health topics would be included. The policy documents also outlined that standard IEC materials would be developed and that CHWs would be required to complete a core-training module in communication techniques for sustainable behavioural change. In an effort to promote ‘bidirectional’ communication, the NSPCH also included plans to engage community and religious leaders in the twice-monthly dissemination of community health messaging, and to use a variety of media including posters, radio and TV.

Despite extensive sensitisation and social mobilisation during Ebola, prefecture-level stakeholders expressed concern that since the outbreak, many communities had abandoned the ‘important practice’ of hand washing and other IPC measures. They emphasised the need for ongoing community engagement on key infectious
diseases and IPC to become a permanent focus of CHW activities. Community leaders also stressed the need for community sensitisation to develop public health emergency preparedness, and some reported to be self-mobilising and establishing community engagement platforms in case of future emergency. In Dubréka, for example, community leaders in one village explained their plan to build a youth centre where youth leaders would meet, devise and deliver sensitisation messages to their communities in the case of any future emergencies. Other community leaders in Dubréka reported that they were encouraging their communities to be more discerning and discriminate their sources of information in future emergencies. As one community leader concluded,

*For future emergencies, we’re encouraging the population not to listen to rumours, but to the local authorities, to the radio, to watch national television and to also consider the sensitisations that are going on in the mosques and health posts. And let us also build a very strong information system with the authorities through which the people should report whatever rumours they hear before acting in any way.*

The extent to which VHCs had been activated, or the CWCs had refocused their activities varied between and within prefectures, and had an impact on the ‘regular’ community social mobilisation activities being conducted at the time of the study, including on malaria prevention and the promotion of basic sanitation and hygiene. Many community leaders highlighted the importance of community sensitisation on health and hygiene, and in villages in Kérouané, Dubréka and Macenta it was reported that the VHC or CWC was conducting community sensitisation activities without incentives from NGOs or the PDH. The frequency of such activities and methods used varied between villages, and the quality, impact and outcome of the action was not being well monitored.

While CHWs were usually part of their local CWC or VHC, many had reverted to providing specific MNCH promotion activities as part of their routine work. As in the pre-Ebola period, the modes of communication and focus of their social mobilisation activities varied by intervention, the implementing partner to whom they were affiliated, and their operational area. In Forécariah, for example, because radio was so successfully utilised during the outbreak, it has been adopted as a key method for delivering and amplifying the reach of CHW messaging post-Ebola. As the representative from one radio station in Forécariah explained,

*We sit together with the technical experts and the community members around the table to discuss and decide on the messages to be delivered. We then give the microphone to the CHW and when they have finished explaining their messages, we then go into the communities to ask if they really understood the messages that the CHWs gave. We ask if they are ready to adopt the measures the CHWs advised and to follow their advice.*

4.7 Supervision and performance quality assurance

Challenges associated with regular supportive supervision of CHWs in the post-Ebola period are consistent with those identified in the pre-Ebola period, largely due to ongoing resource limitations. National-level stakeholders including representatives from the MoH confirmed that the quality of supervision being provided and the systematic use of quality assurance mechanisms remained uncertain.

NGO partners in Dubréka, Forécariah and Macenta implementing iCCM programmes reported that their CHW supervision occurred at least once per month and included cross-checking the validity of the CHW register with community members; using the register to address CHW weaknesses; and refreshing CHW knowledge and skills. It was not clear how routine these activities were or whether supervisors used a standard supervisory checklist. Health centre chiefs reported that, as before Ebola, they continued to hold monthly meetings with CHWs, although the content of these meetings varied and activities were reported to include the provision of refresher trainings; discussion of challenges faced by the CHW; the accurate completion CHW reports; and monitoring CHW drug supply and sale prices. In Forécariah, however, stakeholders suggested that some CHWs
were not motivated to attend the monthly meetings and failed to submit their monthly reports. As one health centre chief concluded,

*Upon asking CHWs why they had stopped delivering their regular reports they told us ‘Ah, if a child has not reached the time when he is supposed to stop breast feeding, but the mother forces him to stop by removing the breast from his mouth, then the child will stop walking and will sit back’. Meaning, that since they have stopped receiving Ebola salaries, then have also stopped the work that they were doing.*

4.8 Monitoring and evaluation, and health information systems

Both the RNCHP and NSPCH recognise the broad lack of engagement by the MoH in the monitoring and evaluation of community health activities. In order to develop an equitable community-health system at scale, the RNCHP emphasised the need to design community health indicators, which should be integrated into the National Health Information System (NHIS). It stipulated that health centre chiefs would be responsible for collecting community-level health data and would deliver it to the PDH for integration into the NHIS. It also suggested that frameworks for the systematic monitoring and evaluation of community health activities be developed and implemented by the MoH, PDH and communities.

According to the NSPCH, steps had been taken towards operationalising these policy recommendations. Starting in 2015, a series of workshops were planned with the objectives of developing community health indicators and integrating them into the NHIS, and designing both national and community monitoring and evaluation frameworks. At the time of the study, it was not clear whether these workshops had been held. At the time of the study, neither the community health indicators nor monitoring and evaluation frameworks had been finalised by the MoH, and implementing partners continued to monitor their own community-level programming, primarily through output indicators. A number of NGO representatives suggested that monitoring data was being increasingly used to make programmatic decisions, but the extent or impact of this evidence-based decision-making could not be verified during the study.
5. Conclusions

The results of this study show mixed results in terms of resilience of community-based MNCH services in Guinea. Whether case management services continued was dependent on several factors, including instructions from the NGO partner and whether an area experienced Ebola transmission earlier or later in the outbreak. In areas that were affected later, stakeholders had more time and resources to prepare, and therefore were more likely to continue services. Common reasons for discontinuing CHW services were: instructions to stop services from the supporting NGO, lack of training, limited protective equipment, limited or no supervision, fear of contracting Ebola, fear of community hostility, and community rejection of services. When CHWs were instructed to continue and were trained on the ‘no touch’ protocol, many CHWs remained active in their communities and were willing to continue providing health-related services. Although CHWs faced mistrust and stigma because of their ties to health facilities, they were better able than outside actors to gain the trust of community members because of their longstanding relationships. Respondents at all levels consistently affirmed that CHWs played an integral role in the Ebola response at the community level, carrying out contact tracing, case finding, social mobilisation and community engagement, and informal caregiving to sick community members. However, their engagement often came relatively late in the outbreak.

In addition to CHWs, this study showed the importance of engaging other key community members. Engagement of trusted and respected community leaders was also crucial to mounting an effective community response to the emergency. Furthermore, TBAs played an important role in supporting maternal health and traditional healers gained increased prominence as trust in health workers diminished, often performing their duties without adequate infection protection. However, TBAs and traditional healers were not adequately supported or engaged in the response. In an emergency, all of these community actors should be immediately engaged in a coordinated response. The establishment of village development committees would further facilitate mobilization and coordination at the community level.

These findings support the hypothesis that the establishment of strong community-based health services through CHWs, along with engagement of other key community actors, will increase both health system and community resilience in emergencies. Following the Ebola outbreak, stakeholders at all levels have recognized the importance of strong community-based health systems to achieve increased and more equitable coverage of essential MNCH interventions and to improve resilience of health systems and improved response to emergencies. The new national community health policy provides a strong foundation for strengthening the community health system. However, it is unclear how this policy will be operationalised and financed. Furthermore, there remain critical service delivery weaknesses, particularly regarding supply chain, training, supervision, and transportation for referral, that were present before, during, and after Ebola. It will require health system strengthening at all levels to address these challenges. There is also a need for rigorous assessments of CHW quality of care and impact of community-based services. These issues will have to be resolved for the initiative to have a significant impact.

Although the Ebola outbreak and its impact could not have been predicted, we can anticipate that some form of emergency, such as disease outbreak, conflict or natural disaster, will occur again in Guinea. To avoid some of the pitfalls seen during the Ebola outbreak, such as poor coordination of activities and unclear policies, emergency preparedness and response plans should be incorporated into the trainings of CHWs, VHCs, CHHs, TBAs, traditional healers, health facility staff, and other actors involved in health service delivery. Furthermore, it will be essential to improve community trust in the health system to improve healthcare seeking and facilitate behaviour change, especially in emergencies. Finally, in an emergency, a balance must be struck between responding to the emergency and continuation of routine services.
Appendix 1 – Map of Guinea

[Map of Guinea]

http://www.nationsonline.org/oneworld/map/guinea-map.htm
## Appendix 2 – Fieldwork schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>Sun 10 July</td>
<td>Arrive in Conakry</td>
</tr>
<tr>
<td></td>
<td>Brief and train research assistant</td>
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<tr>
<td>Mon 11 July</td>
<td>Briefing with UNICEF</td>
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<tr>
<td>Tue 12 July</td>
<td>National stakeholder meetings</td>
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<tr>
<td>Wed 13 July</td>
<td>National stakeholder meetings</td>
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<tr>
<td>Thu 14 July</td>
<td>National stakeholder meetings</td>
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<tr>
<td>Fri 15 July</td>
<td>National stakeholder meetings</td>
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<tr>
<td></td>
<td>Travel to Dubréka</td>
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<tr>
<td>Sat 16 July</td>
<td>Koubiya community and PHU FGDs/interviews</td>
</tr>
<tr>
<td>Sun 17 July</td>
<td>Samatran community FGDs/interviews</td>
</tr>
<tr>
<td>Mon 18 July</td>
<td>Dubréka prefecture-level stakeholder meetings</td>
</tr>
<tr>
<td>Tue 19 July</td>
<td>Travel to Forécariah</td>
</tr>
<tr>
<td>Wed 20 July</td>
<td>Forécariah prefecture-level stakeholder meetings</td>
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<tr>
<td>Thu 21 July</td>
<td>Seremodia community and PHU FGDs/interviews</td>
</tr>
<tr>
<td>Fri 22 July</td>
<td>Kallia community FGDs/interviews</td>
</tr>
<tr>
<td>Sat 23 July</td>
<td>Travel to Macenta</td>
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<tr>
<td>Sun 24 July</td>
<td>Travel to Macenta</td>
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<tr>
<td>Mon 25 July</td>
<td>Macenta prefecture-level stakeholder meetings</td>
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<tr>
<td>Tue 26 July</td>
<td>Irié community FGDs/interviews</td>
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<tr>
<td>Wed 27 July</td>
<td>Komodou community and PHU FGDs/interviews</td>
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<tr>
<td>Thu 28 July</td>
<td>Travel to Kérouané</td>
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<tr>
<td>Fri 29 July</td>
<td>Kérouané prefecture-level stakeholder meetings</td>
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<tr>
<td>Sat 30 July</td>
<td>Banankoro community and PHU FGDs/interviews</td>
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<tr>
<td>Sun 31 July</td>
<td>Gnalemoridou community and PHU FGDs/interviews</td>
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<tr>
<td>Mon 1 August</td>
<td>Travel to Conakry</td>
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<td>Tue 2 August</td>
<td>Travel to Conakry</td>
</tr>
<tr>
<td>Wed 3 August</td>
<td>Preliminary analysis</td>
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<tr>
<td>Thu 4 August</td>
<td>Debrief and transcriptions with field assistant</td>
</tr>
<tr>
<td>Fri 5 August</td>
<td>Debrief workshop</td>
</tr>
<tr>
<td>Sat 6 August</td>
<td>Depart Conakry</td>
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Appendix 3 – Research tools

Focus group discussion framework – caregivers and community members

Data sheet

- Country: ____________________________________________________________
- District: ____________________________________________________________
- Venue: _____________________________________________________________
- Date: __________________________________________________________________________
- KII/FGD unique code: __________________________________________________________________________
- Time KII/FGD started: __________________________________________________________________________
- Time KII/FGD stopped: __________________________________________________________________________
- Name of facilitator: __________________________________________________________________________
- Name of back-up note taker: ______________________________________________________________________
- Name of translator (if used): ______________________________________________________________________
- Digital recording code: __________________________________________________________________________

- General comments and observations:
  (include time taken to travel to link facility, mode of travel, and if possible distance.)
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<th>Marital status</th>
<th>Occupation</th>
<th>Number of children cared for in family unit</th>
<th>Types of health practitioner visited in last two months? E.g. CHW, TBA, traditional healer, staff at health centre</th>
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Discussion framework

NB – men and women in separate groups

First I want to ask you about your family and how you normally seek healthcare.

1. Can you tell me about the healthcare you and your family receive? (before Ebola time)
   - Where do people in your community usually go for healthcare?
   - If your child/baby seems unwell what do you normally do? Who would you consult?
   - From what sources do people in the community usually receive health messages?
   - Who do you trust to give you advice about decisions on healthcare?

2. Can you tell me about the work of community health volunteers in this area? (before Ebola time)
   - What types of people provide health services in this community? (Probe: CHWs, CHCs, TTM, traditional healer, other health volunteers, etc.)
   - What services do they provide? (Probe: iCCM, maternal and newborn services, immunisation, health education)
   - What do you think about these services?
   - Do you normally visit a CHW in the community? Traditional healer? Which? How do you make contact?

Additional prompts:
   - Do they sometimes make referrals for you and your family? How is this process? Do you follow the referral? How far is the place to where people are referred? How do you travel there? How do people feel about referral?
   - Are there some people who do not use the CHW? Why? Are CHW accessible to everyone?
   - What would make it easier for people in your community to use community health services?

Now, I want to ask you about the Ebola outbreak in your community

3. Can you tell me about how the Ebola outbreak affected your community?
   - What were the main ways Ebola was transmitted between people in your community?
   - What were the challenges to preventing new cases?
   - Did you hear Ebola prevention messages? What were the different sources of information on Ebola? Did you understand the messages?
   - What do you think was the best source/method of giving information on Ebola?
   - How did Ebola affect people’s ability to seek healthcare or services like iCCM, ANC, vaccinations, contraceptives, maternal care and advice etc.? What would have helped them to continue using these services?

Next, I would like to talk about when your children were sick (with malaria, pneumonia, or diarrhoea) during the Ebola outbreak. NOT with Ebola.

4. Before Ebola, what did you do if your child was sick?
   - How did you seek healthcare and advice?
   - Who did you seek care from?
   - Did your child receive care? If not, why? What care/treatment was given?
   - Did your child recover?

5. How did you seek care during the Ebola outbreak? (i.e. willingness to seek care)
Were there some types of providers from whom you did not want to seek care during Ebola? Why? CHWs? Health facilities?
- Were you afraid to seek care from CHWs?
- Has the Ebola outbreak changed the way you feel about seeking healthcare or services like ANC, vaccinations, contraceptives, basic healthcare and advice etc.?

6. Was the availability of health services changed during the Ebola outbreak?
- From CHWs?
- From health facilities? Were the clinics providing regular services during the outbreak?
- Were normal services (iCCM, etc.) available, from whom? If not, what was not available? How do you know about this – from your own or other’s experiences?
- Was anyone pregnant during the outbreak? What differences where there in maternal health services that you could get during Ebola? *(Illicit case study of delivering during outbreak)*
- Did anyone have a child who was sick (non-Ebola during the outbreak)? What differences where there in child health services that you could get during Ebola? *(Illicit case study of seeking care for children during outbreak)*
- How were these services different during Ebola than they were before Ebola?
- What differences were there in services from health facilities? Were referrals being made as before? How did you/your community feel about following referrals?
- How did you feel about the quality of services compared to usual?

7. Do you know what work CHWs did relating to Ebola?
- Can you remember the types of works CHWs were doing during Ebola? (E.g. Communication and social mobilisation? Isolation? Treatment? Other?)
- What do you think about the work they did?
- Were the CHWs from your community or from the outside?
- How were health messages given during the outbreak? What was the best way, in your opinion, to deliver the health messages?

8. How could CHW services have been improved during the Ebola outbreak?
- What health services were most lacking during the Ebola outbreak? What were the main challenges you faced seeking care during the outbreak?
- How could CHWs have made maternal and child health services more available and better quality?
- What would have made you more willing to receive healthcare from CHWs? From health facilities?
- From where/whom would you have preferred to receive healthcare? (CHWs, traditional, health centres etc.)
- From where/whom would you want to receive health advice and information about Ebola? CHWs/traditional healers?
- How could CHWs have done more to prevent Ebola from spreading in the community?
- What did you feel generally about the response to Ebola from the community and health sector? What could have been better?
- In the event of another outbreak, do you have any recommendations for how to support community health services?

9. Is there anything you would like to ask us?

Thank you for your time and for sharing your opinions and experiences with us.

[RECORD STOP TIME] __________
Focus group discussion framework – community leaders

Data sheet

- Country: ____________________________________________________________
- District: __________________________________________________________
- Venue: ____________________________________________________________
- Date: ______________________________________________________________
- KII/FGD unique code: _______________________________________________
- Time KII/FGD started: _______________________________________________
- Time KII/FGD stopped: _______________________________________________
- Name of facilitator: _________________________________________________
- Name of back-up note taker: _________________________________________
- Name of translator (if used): _________________________________________
- Digital recording code: _____________________________________________
- General comments and observations: 
  *(include distance or time taken to travel to link facility)*
## Participant information sheet

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<th>Sex</th>
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<th>Years of education</th>
<th>Role in community</th>
<th>How elected or recruited</th>
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Discussion framework

1. Please introduce yourself and describe your role in the community.
   - Do you have a role with regard the health or well-being of the members of your community? How?
   - Did you have a role supporting CHWs in the Ebola response. How? (e.g. health promotion, countering fear, other activities?)

2. Can you tell me about the health services provided in this community?
   - When people are unwell in this community whose advice do they usually seek? (For minor and major health issues)
   - What are the main challenges to getting healthcare in this community?
   - Are there some providers/places people don’t want to go for healthcare? Why?

Now, I would like to ask about CHWs and community health providers in your community.

3. Can you tell me about the health services provided in this community?
   - Please tell me what types of people provide any sort of services related to health in the community. (e.g. CHWs, village health committees, TTM, traditional healers, others?)
   - What services do they provide? Government services? NGO services? Free services?
   - What do you think about these services? How do people receive these health services?
   - Do you have CHWs in this area? How many? Were the CHWs present in your community before Ebola? (If present in community before Ebola, what were they doing in the community?)

   Additional prompts:
   - How are CHWs selected and recruited in this community? Are you involved in the selection of CHWs? How? What do you think about this process?
   - Do they sometimes make referrals? How do people feel about referral? Do they follow the referral? Where are they referred?
   - Are there some people who do not use the CHWs? Why? Or cannot access them?
   - What would make it easier for people in your community to use community health services?
   - What do you think the CHWs do well and less well for mothers and children?

Next, I want to ask you about the Ebola outbreak in your community.

4. Can you tell me about how the Ebola outbreak affected your community?
   - What were the main ways Ebola was transmitted between people in your community?
   - What were the challenges to preventing new cases?
   - Where did you get most of your information during the outbreak?
   - Did you hear Ebola prevention messages? Who gave advice? What did the messages make you feel/do?
   - How did Ebola affect people’s ability to seek healthcare or services like ANC, vaccinations, contraceptives, basic healthcare and advice etc.? What would have helped them to continue using these services?

5. How did the Ebola outbreak impact the CHWs work with mothers and sick children?
   - Were health services such as iCCM available during the outbreak?
   - How was CHWs availability in the community and their willingness to see sick patients?
   - How was the availability of supplies and drugs?
   - Communication and social mobilisation?
- What if someone was sick with a non-Ebola illness? What did they do/where did they go for treatment?

6. How did the Ebola outbreak impact the community’s use of CHW services?
- Willingness to seek care from CHWs? From health facilities?
- The ability or willingness of patients to comply with referrals?
- What (if anything) made people to understand the need to go for treatment?

*Additional prompts:*
- Attitudes about quality of care? By CHWs? In health facilities?

7. How did CHWs contribute to the Ebola response?
- Communication, health promotion and social mobilisation?
- Case identification and reporting?
- Referral?
- Other activities? (e.g. case isolation, case treatment, contact tracing, safe burial, psychosocial care?)
- Which activities were CHWs able to do effectively or less effectively? Why?
- What were the main challenges in carrying out these activities?
- How could their work have been improved?

*Additional prompts:*
- Who coordinated CHW activities? How? Were you involved in this? What can we learn from it?
- How did CHWs respond to the needs of the community?
- What helped them to carry out their activities?

8. What are the main lessons learned and how can the community health system be strengthened for future emergencies?
- In terms of preventing new cases of Ebola in the community, what went well and what did not go well?
- Continuation of regular maternal and child health services? (e.g. iCCM)
- Did CHWs receive the support and guidance they needed from government and partners? Availability of supplies?
- Health promotion and community engagement? How?
- Gaining the trust of communities?
- What are the advantages/disadvantages of using community members as CHWs?
- Preparing for future emergencies? Any advice to the government on how to strengthen community health systems? How to improve the work of CHWs?

9. Is there anything you would like to ask us?

Thank you for your time and for sharing your opinions and experiences with us.
Focus group discussion framework – community health workers

Data sheet

- Country: 
- District: 
- Venue: 
- Date: 
- KII/FGD unique code: 
- Time KII/FGD started: 
- Time KII/FGD stopped: 
- Name of facilitator: 
- Name of back-up note taker: 
- Name of translator (if used): 
- Digital recording code: 

- General comments and observations:
  (include distance or time taken to travel to link facility)
Participant information sheet

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<th>Time in service</th>
<th>Education level</th>
<th>Position</th>
<th>Department / type of facility</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Years and months</td>
<td>Primary, secondary, tertiary</td>
<td></td>
<td>e.g. gov’t facility, mission, NGO-funded facility</td>
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</tbody>
</table>
Discussion framework

First, I would like to ask about your work as a CHW, including the work you did before the Ebola outbreak.

1. Can you tell me about the services you normally provide to mothers and sick children (before Ebola)?
   - Curative services (iCCM)?
   - Maternal and newborn services?
   - Health promotion?
   - Others?
   - What training have you received?
   - How do you receive supplies?
   - Who supervises you?
   - How do you report your activities?
   - About how many sick children did you usually treat per month (before Ebola)?
   - What were the main challenges you faced in providing services?

2. Can you tell me about any other individuals or groups that work on health in the community?
   - Other community health workers or volunteers?
   - TTM other traditional healers?
   - Village health committees?
   - What do these individuals/groups do for mothers and sick children?
   - How do you coordinate with them?
   - Before Ebola, where did people’s health information come from?

   Additional prompts:
   - When someone is sick in your community, who do they prefer to go to for advice/treatment? Why?

Now, I am interested in what happened during the Ebola outbreak

3. How did the Ebola outbreak impact your work with mothers and sick children?
   - To what extent were you able to carry out your normal activities as well as Ebola related work?
   - Did it affect your availability in the community and willingness to see sick patients?
   - Did it affect the supply of drugs, supplies and equipment? What caused problems? Was anything done to resolve this? Was it successful?
   - Did you receive supervision as often as before? Did the content of the supervision change? What was the result of this change?
   - Did you carry out communication and social mobilisation for maternal and child health? What were the challenges in this?
   - Were you able to complete and send reports to supervisors? What caused problems? Was anything done to resolve this? Was it successful?
   - Did Ebola affect care seeking by the population? Were people still willing to come to you for care? Why/why not? Did you do anything to encourage them to come to you?
   - Did Ebola affect the ability or willingness of patients to comply with referrals? What caused problems? Was anything done to resolve this? Was it successful?
   - Was the availability of health facility services changed? Why? What was the effect of this?
   - Did health facility support to you change? In what way? What was the effect of this?
   - Were you trained on the no-touch iCCM policy? How well did this work? Were there any problems?

   Additional prompts:
- **Confidence in being able to provide services?** Why? Which ones were difficult to provide? Which ones were less difficult?
- **How did the Ebola outbreak affect the way your community sought healthcare?**
  - Attitude and response towards public health messages and mobilisation efforts? Why?
  - Willingness to seek care from CHWs? From health facilities?
  - Attitude towards CHWs? Why?
  - Attitude towards health facilities? Why?

Next I would like to ask about your work during the Ebola outbreak response.

4. **What activities did you carry out for the Ebola outbreak response?**
- Communication, health promotion and social mobilisation?
- Case identification and reporting?
- Referral?
- Other activities (Case isolation, case treatment, contact tracing, safe burial, psychosocial care?)
- Specifically, how did you go about this work? (e.g. house-to-house visits, active case finding, quarantining sick people, providing care to sick people)
- Did you hear of any CHWs that were providing care to Ebola patients? *(Illicit case study)*
- Which activities CHWs were able to do effectively or less effectively? Why?
- What were the main challenges in carrying out these activities?
- How did this work affect your ability to provide maternal and child services?
- What is/was your motivation to do this work?

*Additional prompts:*
- **What helped you to carry out your activities?**
  - What would have helped you do it better? Who could have helped? E.g. on how to manage/control Ebola, protect yourself, community messaging and mobilisation on prevention and protection? Engaging with community members/traditional healers/faith leaders? Why? How? E.g. on how to work on health promotion and countering fear?
- **Who coordinated your activities?** How? **What would help you to maintain normal services?** What policies are needed?
- **How did your community respond to you during the outbreak?**
  - Why do you think this was? And how do you feel about your ability to respond to the needs of the community? In future outbreaks how can CHWs contribute to enhancing trust and use of the health system? E.g. Community education and mobilisation strategies?
- **What supplies were available?** From where? Were they sufficient and of good quality? Can we learn anything from the work during the Ebola outbreak that can help future activities? *(If CCCs were in place)* How was your Ebola control work coordinated with Community Care Centres? Did the CCCs change the way you worked? What was your involvement with the CCCs? Now that the CCCs are dismantled, what is the impact on your work?
- **What were your greatest (work-related) concerns during the outbreak?**

5. **How were you supported by the government and partners to contribute to the Ebola outbreak response?**
- Did the government support you to contribute to the response? How? Who guided you?
- **What support was there from partners?** (NGOs, international response, other community groups). How effective?
- **What payment or incentives did you receive for work on Ebola?** Were there any issues with payments? (e.g. lack of standardisation of rates, late payments)
- **What training did you receive?** How was the training? Was it sufficient? What do you think should have been done differently?
- What supervision did you receive? Was the supervision helpful? What do you think should have been done differently?
- What supplies were provided to you? Did you receive the supplies you needed?
- How did you report on your work?
- How were sick people referred to health facilities/Ebola treatment units/CCCs?
- How could you have been supported to do your work better?
- How was your work during Ebola as a CHW similar or different to your work as a CHW before Ebola?

6. What are the main lessons learned and how can the community health system be strengthened for future emergencies?
   - Guidance and protocols? (e.g. Emergency and for MNCH).
   - What else would you need to help you to continue providing maternal and child health services? What do you need to do good work?
   - To help the community to use services?
   - Support from the health system and partners?
   - Community education and mobilisation strategies?
   - Disease outbreak control activities?
   - What recommendations do you have for the MoH, UNICEF, or other partners to better respond to any future outbreak or other emergency?

7. Is there anything you would like to ask us?

Thank you for your time and for sharing your opinions and experiences with us.

[RECORD STOP TIME] _________
Focus group discussion – health workers

Data sheet

- Country: ________________________________
- District: ________________________________
- Venue: ________________________________
- Date: ________________________________
- KII/FGD unique code: ________________________________
- Time KII/FGD started: ________________________________
- Time KII/FGD stopped: ________________________________
- Name of facilitator: ________________________________
- Name of back-up note taker: ________________________________
- Name of translator (if used): ________________________________
- Digital recording code: ________________________________

- General comments and observations:
  (include distance or time taken to travel to link facility)
### Participant information sheet

<table>
<thead>
<tr>
<th>Sex</th>
<th>Age</th>
<th>Time in service</th>
<th>Education level</th>
<th>Position</th>
<th>Department /type of facility</th>
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</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td>Primary, secondary, tertiary</td>
<td></td>
<td>e.g. gov’t facility, mission, NGO-funded facility</td>
</tr>
</tbody>
</table>
Discussion framework

First, I want to ask you about your work and the services you provide here.

1. Background (general not Ebola specific)
   - What health services can pregnant women, their babies and young children receive in this health facility? How do you feel about the capacity of this health facility to deliver these services?
   - Do you receive referrals of pregnant women and their young children from CHWs or other community based practitioners? For what sort of issues? What is the catchment area?

Now I want to ask you about services during the Ebola outbreak.

2. How did the Ebola outbreak affect maternal and child health services at the health facility?
   - Motivation and capacity of staff to work? E.g. Exhaustion, fear.
   - Supply of essential drugs, supplies, equipment as well as PPE?
   - Supervision routine?
   - Completing and sending reports and/or lab samples/results?
   - Care seeking by the population? (e.g. The ability or willingness of patients to seek MNCH services here, including delivery services?)

Additional prompts:
   - *Ability to juggle Ebola-related tasks with regular MNCH tasks? Impact on capacity to assist facility deliveries?*

3. How did the Ebola outbreak impact routine MNCH health facility support to CHWs?
   - Supplies needed for community MNCH services?
   - Supervision of CHWs and support for the MNCH services they offer?
   - Referral services, tracking and reporting of pregnant women, babies and sick children?

Additional prompts: [If these things were a problem, clarify if they were worse than usual, or a continuation of a systemic problem.]
   - *Did the Ebola outbreak have any unexpected positive impact on your work/coordination with CHWs that we can learn from for the future?*

Now I would like to ask about CHWs’ role in the Ebola outbreak response.

4. What activities did CHWs in this area carry out for the Ebola outbreak response?
   - Communication, health promotion and social mobilisation?
   - Case identification and reporting?
   - Referral?
   - Other activities (Case isolation, case treatment, contact tracing, safe burial, psychosocial care?)
   - Which activities CHWs were able to do effectively or less effectively? Why?
   - What were the main challenges in carrying out these activities?

Additional prompts:
   - *What influenced their performance? Probe: training, experience, status in community. What could have been done better?*
   - *How did you feel about CHWs’ ability to respond to the needs of the community? (Ebola and MNCH) and how did local communities respond to CHWs during the outbreak?*
5. How were CHWs supported by the health facility staff to contribute to the Ebola outbreak response?
   - Training?
   - Supervision?
   - Supplies?
   - Collecting data?
   - Providing referral services?
   - Others?

Additional prompts:
- What supplies were provided to CHWs? From whom? Were they sufficient and of good quality? Can we learn anything from the procurement and distribution channels used during the outbreak that can inform future community health programming?
- Who coordinated the community Ebola activities? How? What can we learn from these? How could it be improved? Were there challenges in doing the activities as requested? What? Do you know what supervision CHWs received? From whom? How did this differ from existing supervision? Can we learn anything from the way they were supervised?

6. What are the main lessons learned and how can the community health system be strengthened for future emergencies?
   - Policies and guidance?
   - MNCH service delivery?
   - Utilisation of MNCH services?
   - Support to CHWs from the health system and partners?
   - Health promotion and community engagement?
   - Rapid response to emergencies?

Additional prompts:
- What would help CHWs to maintain normal services as well as Ebola related services?
- Health promotion and community engagement? Probe. How?
- Linkage to other support organisations? (e.g. Care/referral for orphaned children?)
- Support to CHWs from the health system and partners?
- Supervision and training of CHWs on Ebola response? (e.g. Emergency protocols on how to manage a) Ebola, and b) pregnancy and child health during an outbreak?)
- Supplies and PPE?
- Collecting data?
- Providing referral services and tracking referrals?
- Psychosocial and moral support? Did they receive any? Enough?
- In future outbreaks, how can CHWs contribute to enhancing trust in the health system for regular and Ebola services?
- Supporting, advising communities? How? Who else can collaborate on that? Who do communities trust?
- Capacity to respond rapidly?

7. Is there anything you would like to ask us?
Thank you for your time and for sharing your opinions and experiences with us.

[RECORD STOP TIME] __________
Interview framework – policy makers and programme implementers (national level)

Data sheet

- Country: ____________________________________________________________
- Venue: ____________________________________________________________
- Date: ______________________________________________________________
- Unique ID code: _____________________________________________________
- Time interview started: ______________________________________________
- Time interview stopped: _____________________________________________
- Name of interviewer: _______________________________________________
- Name of back-up note taker (if used): _________________________________
- Name of translator (if used): _________________________________________
- Digital recording code: _____________________________________________
- General comments and observations:

Participant information sheet

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<th>Age</th>
<th>Time in service</th>
<th>Education level</th>
<th>Position</th>
<th>Department /type of facility</th>
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<td></td>
<td>Years and months</td>
<td>Primary, secondary, tertiary</td>
<td></td>
<td></td>
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</tbody>
</table>
Discussion framework

I want to start by asking you about your organisation’s work on community health and the EVD response.

1. Background
   - Please describe your organisation’s work in community MNCH.
   - Please describe your organisation’s work in the EVD response, particularly at the community level.
   - Please describe your current position/role and responsibilities?
   - In what ways are you involved with community health workers (programming, strategy, policy)?

Next, I want to ask you about MNCH services, policy and coordination during the Ebola outbreak.

2. How did the EVD outbreak affect community MNCH policy?
   a. Were any policy changes made?
   b. Was the no-touch iCCM policy implemented with CHWs? How well did this work? What was the impact of this?

3. How did the EVD outbreak impact MoH, partner coordination?
   - How did Ebola affect coordination between the MoH and partners? What went well and less well? Was coordination effective?
   - Who coordinated the CHW Ebola activities? How? Did districts take different approaches? What can we learn from these?
   - What do you think are the main lessons from the coordination efforts? Are any of these relevant as we plan how to implement the new CHW policies?

4. How did the EVD outbreak impact delivery of MNCH interventions by CHWs?
   - Was there a change in availability of CHW in the communities and willingness to see patients? (e.g. Absenteeism?)
   - What motivated CHWs to continue working through the outbreak?
   - How was the supply chain and availability of MNCH commodities affected? Was this different from normal during Ebola?
   - What about routine training of CHWs?
   - Supervision of CHWs?
   - Communication and social mobilisation activities by CHWs?
   - Routine monitoring and evaluation of CHW activities?
   - Care seeking by the population?
   - The ability or willingness of patients to follow CHW advice (e.g. comply with referrals?)
   - Availability of health facility services?
   - Health facility support to CHWs?

Additional prompts:
   - How did communities respond to CHWs during the outbreak? Why do you think this was? Did it vary across districts? Why? Do you think it could be improved? How?
   - Supporting, advising communities? How? Who else can collaborate on that? Who do communities trust?
   - Some areas had no established CHW services at the time of the Ebola outbreak, how did these areas fare, compared to other areas?

Now I would like to ask about CHWs’ role in the Ebola outbreak response
[Note: not all national level interviewees would be expected to be able to answer all parts of, some may be omitted if not relevant]

5. What activities did CHWs carry out for the Ebola outbreak response?
   - Communication, health promotion and social mobilisation?
   - Case identification and reporting?
   - Case isolation?
   - Case management?
   - Contact tracing?
   - Safe burial?
   - Psychosocial care?
   - Referral?
   - Other activities?

6. Do you know which activities CHWs were able to do effectively or less effectively? Why?

7. How and to what extent were CHWs supported by the health system and partners to contribute to the EVD outbreak response? And, what do you think could have been better?
   - What remuneration did CHWs receive? In addition to their normal remuneration?
   - What training did CHWs receive?
   - What supervision did CHWs receive?
   - What supplies were provided to CHWs? From whom? Were they sufficient and of good quality? Can we learn anything from the procurement and distribution channels used during the outbreak that can inform future programming?
   - What monitoring and evaluation activities were carried out? Any lessons from these?
   - To what extent were referral services available?

8. What are the main lessons learned and how can the community health system be strengthened for future emergencies?
   - Policies and guidance?
   - MNCH service delivery?
   - Utilisation of MNCH services? Support to CHWs from the health system and partners?
   - Health promotion and community engagement?
   - Rapid response to emergencies?

Thank you for your time and for sharing your opinions and experiences with us.

[RECORD STOP TIME] __________
Interview framework – programme implementers and government health officials (prefecture level)

Data sheet

- Country: ________________________________
- Venue: ________________________________
- Date: ________________________________
- Unique ID code: ________________________________
- Time interview started: ________________________________
- Time interviewer stopped: ________________________________
- Name of interviewer: ________________________________
- Name of back-up note taker (if used): ________________________________
- Name of translator (if used): ________________________________
- Digital recording code: ________________________________
- General comments and observations:

Participant information sheet

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<td>Primary, secondary, tertiary</td>
<td></td>
<td>e.g. gov’t department, mission, NGO facility etc.</td>
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</tbody>
</table>
Discussion framework

I want to start by asking you about your organisation’s work on community health and the EVD response in this area.

1. Background
   - Please describe your organisation’s work in community MNCH.
   - Please describe your organisation’s work in the EVD response, particularly at the community level.
   - Please describe your current position/role and responsibilities?
   - In what ways are you involved with community health workers (programming, strategy, policy)?

2. Please tell me about community level delivery of MNCH services in this area before Ebola?
   - Who are the main providers of health services or health information in the community? (Probe: CHWs, TTMss, traditional/faith healers, other community health volunteers).
   - What MNCH services were provided at the community level? (Probe: iCCM, maternal/newborn).
   - [If applicable] What were the components of your iCCM program? What was effective? Less effective? Any issues with drug supplies? Supervision? Reporting? Training?
   - [If applicable] Did iCCM end before Ebola? Why?

Additional prompts:
   - How do you think TBAs and traditional faith healers feel about CHWs? Do they work well together and support each other or are there tensions? (Probe, legal issues, competition, dangerous practices).
   - Which types of providers do you feel communities are most comfortable seeking help from? (probe different types of issues: pregnancy and delivery advice, ANC, health problems during pregnancy, concerns with neonates)

Next, I want to ask you about community MNCH services during the Ebola outbreak.

3. How did the EVD outbreak affect community MNCH services?
   - Did iCCM end due to Ebola? How was this change communicated?
   - Was there a change in availability of CHWs in the communities and willingness to see patients? (e.g. Absenteeism?)
   - How was the supply chain and availability of MNCH commodities affected? Was this different from normal during Ebola?
   - What about routine training of CHWs?
   - Supervision of CHWs?
   - Communication and social mobilisation activities by CHWs?
   - Health facility support to CHWs?
   - What motivated CHWs to continue working through the outbreak?
   - Routine monitoring and evaluation of CHWs activities?
   - Care seeking by the population?
   - The ability or willingness of patients to follow CHW advice (e.g. comply with referrals?)
   - Availability of health facility services?

Additional prompts:
   - How did Ebola affect coordination between the health system and other implementing partners in this district? How was it changed, what do you think are the main lessons from the coordination efforts? Was coordination effective? What went well and less well?
- What about other routine activities: (E.g. training and supervision of CHWs? Routine monitoring and evaluation of CHW activities? Availability of services? Health facility support to CHWs?
- Was there a change in the way people sought MNCH services?

Now I would like to ask about CHWs’ role in the Ebola outbreak response.

4. What activities did CHWs carry out for the Ebola outbreak response?
   - Communication, health promotion and social mobilisation?
   - Case identification and reporting?
   - Referral? Other activities (Case isolation, case treatment, contact tracing, safe burial, psychosocial care?)
   - Which activities CHWs were able to do effectively or less effectively? Why?
   - What were the main challenges in carrying out these activities?

Additional prompts:
- What do you think influenced CHW performance and ability to work during the outbreak?
  o How did you feel about the CHWs’ ability to respond to the needs of the community during the outbreak? Why do you think this was? Did it vary across districts? Why? Do you think it could be improved? How?
  o How was the motivation and capacity of staff to work? E.g. Exhaustion, fear. How could it have been managed better?
- Did community behaviour and attitudes influence CHW ability to work effectively?
  o How did communities respond to CHWs during the outbreak? E.g. ability or willingness of patients to comply with referrals.
- Were Community Care Centres used in this area? Please describe how the Ebola Community Care Centres worked in this area? Who was it staffed by, where are those people now? How did CHWs interact with CCCs? Are there any lessons we should learn from the CCCs that are relevant to the CHW programme / preparedness for future outbreaks?

5. How and to what extent were CHWs supported by the health system and partners to contribute to the EVD outbreak response?
   - How effective was partner coordination on Ebola support to CHWs? What can we learn from what went well or less well? How could it have been better?
   - What remuneration did CHWs receive? In addition to their normal remuneration?
   - What Ebola training did CHWs receive? From whom?
   - What supervision did CHWs receive? From whom? How did this differ from existing supervision? Can we learn anything from the way they were supervised?
   - What supplies were provided to CHWs? From whom? Were they sufficient and of good quality? Can we learn anything from the procurement and distribution channels used during the outbreak that can inform future programming?
   - What monitoring and evaluation activities were carried out? Any lessons from these?
   - To what extent were referral services available? How could referral systems have been strengthened?
   - Were policies and action plans in place that allowed CHWs to contribute? What were they? How effective were they? What would you change?

6. What are the main lessons learned and how can the community health system be strengthened for future emergencies?
   - Policies and guidance?
   - MNCH service delivery?
   - Utilisation of MNCH services?
   - Support to CHWs from the health system and partners?
- Health promotion and community engagement?
- Rapid response to emergencies?

Additional prompts:
- Linkage to other support organisations. Care/referral for orphaned children? How can CHWs contribute to enhancing trust in the health system?

Thank you for your time and for sharing your opinions and experiences with us.
Interview framework – Ebola survivors and their family members

Data sheet

- Country: ________________________________
- Venue: ________________________________
- Date: ________________________________
- Unique ID code: ________________________________
- Time interview started: ________________________________
- Time interviewer stopped: ________________________________
- Name of interviewer: ________________________________
- Name of back-up note taker (if used): ________________________________
- Name of translator (if used): ________________________________
- Digital recording code: ________________________________
- General comments and observations:

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<th>Marital Status</th>
<th>Number of children cared for in family unit</th>
<th>Types of health practitioner visited in last two months?</th>
</tr>
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</table>
Discussion framework

I want to ask you about your (your family member’s) experience with Ebola.

1. Before becoming infected, did you (your family member) receive any Ebola prevention messages?
   - What messages?
   - What impact did these messages have on you?

2. How did you (your family member) become infected?

3. What happened after you (your family member) became infected?
   - Did you (your family member) seek care from any providers outside the home? If not, why?
   - Did you (your family member) have any contact with CHWs in your community?
   - Did you (your family member) receive care?
   - Was the infection reported to anyone? If yes, what was the response?
   - Were you (your family member) isolated from other people?
   - Who transported you (your family member) to a facility for care?
   - Did anyone do contact tracing?

4. What happened after you (your family member) recovered/died?
   Probes, if recovered:
   - Were you (was your family member) able to return home?
   - Have you received any psychosocial care?
   - Have you received any other support?

   Probes, if deceased:
   - What kind of burial was done?

5. What role did CHWs play in the Ebola response?
   Probes, if recovered:
   - Communication and social mobilisation?
   - Case identification and reporting?
   - Case isolation?
   - Case treatment?
   - Contact tracing?
   - Safe burial?
   - Psychosocial care?
   - Other activities?

6. How could CHW services have been improved during the Ebola outbreak?
   - To make you more willing to go to CHWs for treatment?
   - To make maternal and child health services more available?
   - For the Ebola response?

Thank you for your time and for sharing your opinions and experiences with us.

[RECORD STOP TIME] ______________
Appendix 4 – Consent form

French language version


Introduction
Bonjour/bonsoir. Nous travaillons pour une organisation de recherche appelée Anthrologica et nous menons une étude pour le compte de l’UNICEF sur l’utilisation des agents de santé communautaires (ASC) en Guinée durant l’épidémie d’Ebola. Cette étude est destinée à informer la composante Santé Communautaire des plans de Rétablissement de Santé Post-Ebola que le gouvernement de la Guinée est en train de développer, notamment en lien avec le renforcement de la résilience à travers des systèmes de santé communautaire plus solides. Cette étude se servira des informations des personnes comme vous pour mieux comprendre le rôle des agents de santé communautaires pendant la réponse, et d’informer la façon dont ils/elles peuvent être mieux utilisées à l’avenir pour offrir des services pour mères et enfants. Vous êtes invité(e) à participer à un entretien ou des discussions en focus groupe pour ce projet. Vous pouvez décider de participer à l’entretien ou aux discussions en focus groupe, ou non. Ceci est entièrement votre choix. Si vous décidez de participer, vous pouvez changer d’avis plus tard et arrêter à tout moment. Vous ne serez pas payé(e) pour participer à l’entretien ou aux discussions en focus groupe. Participer à l’entretien ou aux discussions en focus groupe ne vous donnera pas un accès supplémentaire aux soins de santé ou médicaux. C’est seulement une interview. Vous pouvez poser toutes les questions relatives à l’étude et nous y répondrons à votre satisfaction.

Objectif
Le but de l’entretien ou de discussions en focus groupe est d’obtenir des informations sur les questions relatives aux ASC et les services de santé pour mères et enfants. Plus précisément:
• Pour documenter l’effet du virus Ebola sur la mise en œuvre de services communautaires pour les mères et enfants;
• Pour documenter la contribution des ASC à la réponse contre l’Ebola;
• Pour déterminer comment les ASC auraient pu être utilisé(e)s plus efficacement et soutenu(e)s lors de la réponse contre l’Ebola;
• Pour déterminer les leçons apprises et les recommandations visant à renforcer les systèmes de santé et d’assurer des services futurs pour les mères et enfants.

Sélection des participant(e)s
Vous avez été choisi(e) pour participer à cette recherche étant donné votre rôle/le rôle de votre organisation dans la provision des services de santé en Guinée et /ou les expériences de vos communautés en matière d’Ebola en relation avec les ASC. L’entretien durera environ une heure. Les discussions en focus group dureront environ une heure et demie. Nous croyons qu’il n’y a aucun risque pour vous-même s’il est à noter qu’il peut y avoir des aspects de votre participation à cette recherche qui impliquent des risques qui sont l’état actuel imprévisible. Si vous souhaitez discuter de quelques problèmes que ce soit qui peuvent survenir après cette interview ou des discussions de groupe, vous pouvez le faire avec le Dr Sounkary DOUMBOUYA conseiller en Stress UNDSS - CISMU GUINEE CONAKRY (Tel: 00224 622 674 690 email: sounkary.doumbouya@undp.org).

Participation volontaire et confidentialité
La participation est volontaire. Vous avez le droit de vous retirer de la discussion à tout moment sans motif et sans conséquence. Il n’y a pas de coût associé à votre participation. Nous ferons en sorte que vos informations,
opinions et expériences restent confidentielles et elles ne seront utilisées que dans le but défini de l'étude. Nous n’utiliserons pas votre nom. Votre nom et d’autres choses qui vous décrivent (le nom de votre ville, le nom de votre bureau, les noms de toutes les autres personnes que vous mentionnez) n’apparaîtrons pas lorsque nous discutons des entretiens/discussions de groupe avec d'autres personnes ou publisons un rapport sur la base de notre recherche. Les entretiens et discussions en focus group peuvent être enregistrés (votre voix uniquement) dans le but de rédiger vos réponses plus tard. Les enregistrements ne seront pas joués en public pour quiconque, par exemple, pas à la radio. Ceux-ci seront détruits à la fin de l'étude. Avec votre permission, nous pouvons également prendre une photo de vous avec les participants des groupes de discussion. Celles-ci seront utilisées aux fins de la présente étude et peuvent être inclues dans les publications académiques et autres matériels de l’UNICEF et Anthrologica. Si votre photo est publiée, vous ne devrez pas être identifié(e) par votre nom et les processus de confidentialité (décrits ci-dessus) seront suivis.

En ce qui concerne la collecte d’informations pour cette étude, nous vous serons reconnaissants pour votre aide et sollicitions de ce fait votre consentement et coopération. Si vous avez des questions concernant cette étude, vous pouvez contacter le Chercheur Principal de l'étude: Nathan Miller (email: nmiller@unicef.org; téléphone: +1 347 681 6450), ou Tharcienne Ndihokubwayo (email: tndihokubwayo@unicef.org, téléphone : 622350294) représentant de l'UNICEF-Guinée, Coléah Corniche, Conakry, Guinée. Si vous avez des questions concernant votre participation, vous pouvez également contacter le comité d’éthique pour la Guinée: Prof Oumou Sow Younoussa (email: oumou45@yahoo.fr, téléphone: 664 962 434), Président, Hopital Ignace Dr Emmanuel Roland Malano (email: malanoroland@gmail.com; Tel: 622000453), point focal du ministère de la Santé.

CONSENTEMENT ÉCLAIRÉ

Nous allons vous donner une copie signée de ce formulaire à conserver. En acceptant de participer à cette interview, vous comprenez que vous ne serez pas payé (e) pour l’entretien, votre nom et les informations personnelles ne seront pas inclus dans aucun rapport, et vous pouvez arrêter l’entretien à tout moment que vous le souhaitez.

J'ai lu les informations ci-dessus, ou celles-ci ont été lues pour moi. J'ai eu l'occasion de poser des questions à ce sujet et toutes les questions que j'ai posées ont été répondues à ma satisfaction. Je consens volontairement à être participant (e) à cette étude :

__________________________ ____________________________
Nom de Participant (e) Signature

__________________________ ____________________________
Nom du Témoin Signature
Qualitative assessment of MNCH and Ebola-related services by Community Health Workers during the 2014-2015 Ebola outbreak in Guinea, Liberia and Sierra Leone

Introduction
Hello. We work for a research organisation called Anthrologica and we are conducting a study on behalf of UNICEF on the use of Community Health Workers (CHW) in Guinea during the Ebola outbreak. This study is meant to inform the community health component of the Post-Ebola Health Recovery Plans that the government of Guinea is developing, particularly in relation to increasing resilience through stronger community health systems. This study will use information from individuals like you to better understand the role of CHWs during the response, and to inform how they may be best utilised in the future to provide services for mothers and children. You are being asked to participate in an interview or focus group discussion for this project. You can decide to participate in the interview or focus group discussion, or not. It is entirely your choice. If you decide to take part, you can change your mind later on and stop at any time. You will not be paid to participate in the interview or focus group discussion. Participating in the interview or focus group discussion will not provide extra health or medical care. It is only an interview. You may ask any questions related to the study and we will answer these questions to your satisfaction.

Purpose
The purpose of the interview or focus group discussion is to get information about matters relating to CHWs and health services for mothers and children. Specifically:
To document the effect of Ebola on the implementation of community-based services for mothers and children;
To document the contribution of CHWs to the Ebola response;
To identify how CHWs could have been more effectively used and supported during the Ebola response;
To determine lessons learned and recommendations for strengthening healthcare systems and for ensuring future services for mothers and children.

Participant Selection
You have been chosen to participate in this research given your/your organisation’s role in providing health services in Guinea and/or your communities experiences of Ebola as they relate to CHWs. The interview will last for approximately one hour. Focus group discussions will last for approximately one and a half hours. We believe there is no risk to you although it is noted that there may be aspects of your participation in this research that involve risks that are currently unforeseeable. If you would like to discuss any issues that may arise after this interview or focus group discussion with Dr Soukary DOUMBOUYA Stress Counsellor UNDSS – CISMU GUINEE CONAKRY (Tel: 00224 622 674 690 email: soukary.doumbouya@undp.org).

Voluntary Participation and Confidentiality
Participation is voluntary. You have the right to withdraw from the discussion at any time without reason and without penalty. There is no cost associated with your participation. We will ensure that your information, opinions and experiences are kept confidential and will only be used for the purpose of the study outlined. We will not use your name. Your name and other things that describe you (your town name, your office name, any other persons’ names you mention) will not appear when we discuss the interviews/focus group discussions with others or publish a report based on our research. Interviews and focus group discussions may be recorded (your voice only) for the purpose of later writing your answers. The recordings will not be played for anyone in public, for example, not on the radio. These will be destroyed at the end of the study. With your permission, we may also take a photograph of you with the focus group participants. These will be used for the purpose of the current study and may be included in academic publications and other material for UNICEF and
Anthrologica. If your photograph is published, you shall not be identified by name and confidential processes (outlined above) will be followed.

In regard to collecting information for this study, we would greatly appreciate your help and therefore seek your consent and cooperation. If you have any questions about this study, you may contact the study Principal Investigator: Nathan Miller (email: nmiller@unicef.org; telephone: +1 347 681 6450), or Tharcienne Ndhokubwayo (email: tndihokubwayo@unicef.org; telephone: 622350294) a representative from UNICEF-Guinea, Coléah Corniche, Conakry, Guinea. If you have any concerns regarding your participation, you may also contact the ethics review committee for Guinea: Prof Oumou Younoussa Sow (email: oumou45@yahoo.fr; telephone: 664962434), Chairperson, Hopital Ignace. Dr Emmanuel Roland Malano (email: malanoroland@gmail.com; Tel: 622000453), Focal Point of the Ministry of Health.

INFORMED CONSENT

We will give you a signed copy of this form to keep. By agreeing to take part in this interview, you understand that you will not be paid for the interview, your name and personal information will not be included in any reports, and you can stop the interview at any time as you wish.

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study:

_________________________  ______________________  ________________  ________________
Name of Participant       Signature                 Thumb Print       Date

_________________________  ______________________  ________________  ________________
Name of Witness           Signature                 Thumb Print       Date
## Appendix 5 – Participant demographic data

### Table 2. Key informant interview and focus group discussion participants

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<th>Kéouané</th>
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<td>Number of activities</td>
<td>Number of participants</td>
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### Table 3. National-level interviews

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### Table 4. Demographic details, prefecture-level programme implementers and community health stakeholders

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<th>Kérouané</th>
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<td>• Chief of DPH</td>
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<td>• Head of Community Health Services (CHW Focal Person), DPH</td>
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<td></td>
<td>• Head of Community Health, DPH</td>
<td>• Director of Micro-realization, GoG</td>
<td>• President of Prefectural Traditional Healers Association</td>
<td>• General Secretary of Administrative Affairs, Prefecture Government</td>
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<td></td>
<td>• Head of Care Unit, DPH</td>
<td>• President of Prefectural Traditional Healers Association</td>
<td>• Treasurer of Prefectural Traditional Healers Association</td>
<td>• Co-ordination, FLDD</td>
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<td>• Prefecture Supervisor of CHW Programme, RTI</td>
<td>• Chief of Community Radio Station</td>
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<td>• Head of Supervision and Evaluation, RTI</td>
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### Table 5. Demographic details, community leaders

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<td>• Representative of Town Chief</td>
<td>• Women’s Leader</td>
<td>• Village Speaker</td>
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### Table 6. Demographic details, caregivers of children under five

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<td>4 Trader/Business</td>
<td>8 Trader/Business</td>
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<td>6 Farmer</td>
<td>10 Farmer</td>
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<td>Tailor</td>
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<td>-- Tailor</td>
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<td># Children in Care</td>
<td>1-3 yrs</td>
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<tr>
<td>Education Level</td>
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<td>Housewife</td>
<td>5 Housewife</td>
<td>-- Housewife</td>
<td>-- Housewife</td>
</tr>
<tr>
<td>Student</td>
<td>1 Student</td>
<td>-- Student</td>
<td>1 Student</td>
</tr>
<tr>
<td># Children in Care</td>
<td>1-3 yrs</td>
<td>3 1-3 yrs</td>
<td>5 1-3 yrs</td>
</tr>
<tr>
<td>Education Level</td>
<td>1-3 yrs</td>
<td>3 1-3 yrs</td>
<td>5 1-3 yrs</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Single</td>
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<td>1 Single</td>
</tr>
<tr>
<td>Married</td>
<td>11 Married</td>
<td>14 Married</td>
<td>11 Married</td>
</tr>
<tr>
<td>Widow</td>
<td>1 Widow</td>
<td>-- Widow</td>
<td>-- Widow</td>
</tr>
<tr>
<td>Occupation</td>
<td>Trader</td>
<td>4 Trader/Business</td>
<td>8 Trader/Business</td>
</tr>
<tr>
<td>Farmer</td>
<td>1 Farmer</td>
<td>6 Farmer</td>
<td>10 Farmer</td>
</tr>
<tr>
<td>Tailor</td>
<td>1 Tailor</td>
<td>-- Tailor</td>
<td>-- Tailor</td>
</tr>
<tr>
<td>Housewife</td>
<td>5 Housewife</td>
<td>-- Housewife</td>
<td>-- Housewife</td>
</tr>
<tr>
<td>Student</td>
<td>1 Student</td>
<td>-- Student</td>
<td>1 Student</td>
</tr>
<tr>
<td># Children in Care</td>
<td>1-3 yrs</td>
<td>3 1-3 yrs</td>
<td>5 1-3 yrs</td>
</tr>
</tbody>
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### Table 7. Demographic details, Ebola survivors

<table>
<thead>
<tr>
<th>Dubréka</th>
<th>Forécariah</th>
<th>Macenta</th>
<th>Kérouané</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>-- Male</td>
<td>3 Male</td>
<td>1 Male</td>
</tr>
<tr>
<td>Female</td>
<td>1 Female</td>
<td>2 Female</td>
<td>1 Female</td>
</tr>
<tr>
<td>Age</td>
<td>Range unkown</td>
<td>Range 29-72</td>
<td>Range 24-30</td>
</tr>
<tr>
<td>Average</td>
<td>-- Average</td>
<td>45 Average</td>
<td>24 Average</td>
</tr>
<tr>
<td>Education Level</td>
<td>None</td>
<td>-- None</td>
<td>5 None</td>
</tr>
<tr>
<td>Primary</td>
<td>-- Primary</td>
<td>-- Arabic</td>
<td>1 Arabic</td>
</tr>
<tr>
<td>Secondary</td>
<td>Secondary</td>
<td>-- Secondary</td>
<td>1 Secondary</td>
</tr>
<tr>
<td>Tertiary</td>
<td>Tertiary</td>
<td>-- Tertiary</td>
<td>1 Tertiary</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Single</td>
<td>-- Single</td>
<td>1 Single</td>
</tr>
<tr>
<td>Married</td>
<td>1 Married</td>
<td>5 Married</td>
<td>1 Married</td>
</tr>
<tr>
<td>Widow</td>
<td>-- Widow</td>
<td>v Widow</td>
<td>-- Widow</td>
</tr>
<tr>
<td>Occupation</td>
<td>Trader</td>
<td>-- Trader/Business</td>
<td>2 Trader/Business</td>
</tr>
<tr>
<td>Farmer</td>
<td>-- Farmer</td>
<td>3 Farmer</td>
<td>1 Farmer</td>
</tr>
<tr>
<td>Health worker</td>
<td>Health worker</td>
<td>-- Health worker</td>
<td>-- Health worker</td>
</tr>
<tr>
<td>Traditional Healer</td>
<td>Traditional Healer</td>
<td>-- Traditional Healer</td>
<td>-- Traditional Healer</td>
</tr>
<tr>
<td>Student</td>
<td>-- Student</td>
<td>Student</td>
<td>1 Student</td>
</tr>
<tr>
<td>Health Practitioner / Facility visited (&lt; 2 mo.)</td>
<td>Hospital</td>
<td>Hospital (2)</td>
<td>Health Centre None (2)</td>
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</table>
### Table 8. Demographic details, community health workers

<table>
<thead>
<tr>
<th>Sex</th>
<th>Dubréka</th>
<th>Forécariah</th>
<th>Macenta</th>
<th>Kérouané</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>8</td>
<td>11</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
<td>Female</td>
<td>--</td>
<td>1</td>
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<table>
<thead>
<tr>
<th>Age</th>
<th>Range</th>
<th>Range</th>
<th>Range</th>
<th>Range</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>26-45</td>
<td>22-42</td>
<td>33-45</td>
<td>32-65</td>
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<table>
<thead>
<tr>
<th>Time in Service</th>
<th>&lt; 1 year</th>
<th>&lt; 1 year</th>
<th>&lt; 1 year</th>
<th>&lt; 1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 years</td>
<td>1-2 years</td>
<td>1-2 years</td>
<td>1-2 years</td>
<td>--</td>
</tr>
<tr>
<td>(during Ebola)</td>
<td>(during Ebola)</td>
<td>(during Ebola)</td>
<td>(during Ebola)</td>
<td>--</td>
</tr>
<tr>
<td>2+ years</td>
<td>2+ years</td>
<td>2+ years</td>
<td>2+ years</td>
<td>10</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Education Level</th>
<th>None</th>
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<td>Primary</td>
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<td>None</td>
<td>--</td>
</tr>
<tr>
<td>Secondary</td>
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<td>Secondary</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Tertiary</td>
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<td>Tertiary</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Technical</td>
<td>-- Technical</td>
<td>-- Technical</td>
<td>-- Technical</td>
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### Table 9. Demographic details, health workers

<table>
<thead>
<tr>
<th>Sex</th>
<th>Dubréka</th>
<th>Forécariah</th>
<th>Macenta</th>
<th>Kérouané</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Female</td>
<td>-- Female</td>
<td>-- Female</td>
<td>-- Female</td>
<td>--</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time in Service</th>
<th>&lt; 1 year</th>
<th>&lt; 1 year</th>
<th>&lt; 1 year</th>
<th>&lt; 1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 years</td>
<td>1-2 years</td>
<td>1-2 years</td>
<td>1-2 years</td>
<td>--</td>
</tr>
<tr>
<td>(during Ebola)</td>
<td>(during Ebola)</td>
<td>(during Ebola)</td>
<td>(during Ebola)</td>
<td>--</td>
</tr>
<tr>
<td>2+ years</td>
<td>2+ years</td>
<td>2+ years</td>
<td>2+ years</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Education Level</th>
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<th>None</th>
<th>None</th>
<th>--</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>None</td>
<td>-- Primary</td>
<td>None</td>
<td>--</td>
</tr>
<tr>
<td>Secondary</td>
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<td>Secondary</td>
<td>--</td>
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<tr>
<td>Technical</td>
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### Table 10. Demographic details, traditional birth attendants

<table>
<thead>
<tr>
<th>Sex</th>
<th>Dubréka</th>
<th>Forécariah</th>
<th>Macenta</th>
<th>Kérouané</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>-- Male</td>
<td>Male</td>
<td>-- Male</td>
<td>--</td>
</tr>
<tr>
<td>Female</td>
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<td>Female</td>
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<table>
<thead>
<tr>
<th>Age</th>
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<table>
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<th>Time in Service</th>
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<th>&lt; 1 year</th>
<th>&lt; 1 year</th>
<th>&lt; 1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 years</td>
<td>1-2 years</td>
<td>1-2 years</td>
<td>1-2 years</td>
<td>--</td>
</tr>
<tr>
<td>(during Ebola)</td>
<td>(during Ebola)</td>
<td>(during Ebola)</td>
<td>(during Ebola)</td>
<td>--</td>
</tr>
<tr>
<td>2+ years</td>
<td>2+ years</td>
<td>2+ years</td>
<td>2+ years</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education Level</th>
<th>None</th>
<th>None</th>
<th>None</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
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<td>Primary</td>
<td>None</td>
<td>--</td>
</tr>
<tr>
<td>Secondary</td>
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<td>Secondary</td>
<td>1</td>
</tr>
<tr>
<td>Tertiary</td>
<td>None</td>
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<td>--</td>
</tr>
<tr>
<td>Technical</td>
<td>-- Technical</td>
<td>-- Technical</td>
<td>-- Technical</td>
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</tr>
</tbody>
</table>

### Facility Affiliation

<table>
<thead>
<tr>
<th>Health Centre</th>
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<th>Health Centre</th>
<th>Health Centre</th>
<th>--</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Post</td>
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<td>Health Post</td>
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<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>--</td>
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</tbody>
</table>
Bibliography


Barden-FO’Fallon, Janine, Mamadou Alimou Barry, Paul Brodish et al. 2015. Rapid assessment of Ebola-related implications for reproductive, maternal, newborn and child health service delivery and utilization in Guinea. PLOS Currents Outbreaks. doi: 10.1371/currents.outbreaks.0b0ba06009dd091bc39ddb3c6d7b0826


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WHO. 2016d. Geographical distribution of new and total confirmed cases from 30th March 2016. World Health Organization. http://apps.who.int/ebola/sites/default/files/thumbnails/image/sitrep_days_since_last_case_etc_location_23.png?ua=1


All web links accessed 29 November 2017.