

Decentralised models of care in  
Médecins Sans Frontières (MSF)  
OCBA missions: Case study evaluation  
for Kabo project, Central African Republic



**Now we have our  
own health workers**

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## Abstract

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### Introduction

This case study examines decentralised models of care (DMC) implemented in the MSF OCBA Kabo project in Central African Republic since April 2017, in response to restricted access to healthcare caused by insecurity and distance.

### Methods

Methods included a document review, site visits, interviews and focus group discussions with MSF staff, communities and other stakeholders. Medical data was analysed retrospectively.

### Findings/conclusions

The DMC strategy was a highly relevant response to the problems of access to healthcare. The model works through an appropriate combination of community case management of malaria and diarrhoea with integrated screening for malnutrition; a motorbike referral system; strong health promotion and mortality surveillance; decentralised preventive interventions; community participation; good geographical coverage; and community ARV groups.

Some appropriate adaptations to the programme have been made since its inception, as understanding of the context grew.

After initial challenges due to insecurity, the new community strategy was effectively implemented with good results. Observed changes included: improved access to healthcare; changes in perception of illness and health-seeking behaviour; reduction in community-based and hospital mortality for <5-years and case fatality rates of malaria; reduction of severe diarrhoea cases; increased utilisation of the maternity waiting home, where women wait to deliver at the health facility (though other factors may also have contributed to some these changes). Challenges included: low level education of community health workers; insecurity; budget limitations and difficult road access on one road.

**KEYWORDS:** access to healthcare, decentralised models of care, community case management, community health workers, community strategy, community participation, health-seeking behaviour

## Abbreviations

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ANC	Antenatal care
ARI	Acute respiratory tract infection
ARV	Antiretroviral medications
ATFC	Ambulatory therapeutic feeding centre
CAR	Central African Republic
CHW	Community health worker
CI	Confidence intervals
COGES	Comité de gestion – community-based health facility management committee
CMR	Crude mortality rate
DMC	Decentralised models of care
DRC	Democratic Republic of Congo
DTP	Diphtheria, tetanus, polio
FGD	Focus group discussion
HC	Health centre
HMIS	Health management information system
HP	Health post
iCCM	Integrated community case management
ICRC	International Committee of the Red Cross
ICU	Intensive care unit
IDP	Internally displaced people
IPD	Inpatient department
ITFC	Inpatient therapeutic feeding centre
MoH	Ministry of Health
MSF	Médecins Sans Frontières
MUAC	Mid upper arm circumference
MWH	Maternity waiting home
NGO	Non-governmental organisation
OCBA	Operational Centre Barcelona
OCHA	UN Office for the Coordination of Humanitarian Affairs
OPD	Outpatient department
PICU	Paediatric intensive care unit
PLHIV	People living with HIV
PNC	Postnatal care
PHC	Primary healthcare
TBA	Traditional birth attendant
TOR	Terms of reference
U5MR	Under five mortality rate
UNICEF	United Nations Children’s Fund

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# 1 Executive summary

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## Purpose and objectives

This report examines the case study of decentralised models of care (DMC) implemented in the MSF OCBA Kabo project in Central African Republic (CAR). It is part of an evaluation that was commissioned to draw lessons learnt from three MSF projects and improve current and future DMC interventions. Specific objectives included evaluating the effect of changes in access to healthcare, effects of DMC on higher levels of care, community participation/involvement, community perception of DMC activities and specific aspects of DMC strategy. Evaluation criteria covered relevance, appropriateness and effectiveness.

## Evaluated project

At the time of the evaluation, the Kabo project had three components: community healthcare activities in the rural periphery along four main roads and in seven camps populated by the nomadic Mbarara people; primary healthcare (PHC) in Moyen Sido health post (HP); and support to Kabo health centre (HC). The latter provides primary and secondary healthcare services.

The current community health strategy was implemented in March 2017 and consists of the following:

- 1) **31 community-based treatment points**, where teams consisting of a male community health worker (CHW) and a female trained traditional birth attendant (TBA) provide treatment for uncomplicated malaria and diarrhoea for pregnant women and children under 15-years-old, give iron/folate supplementation, deworming medication and preventive malaria treatment for pregnant women; screen for acute malnutrition and conduct health promotion activities. Home visits for postnatal check-ups of mothers and newborns were added to the programme in May, in the villages along one of the four main roads. Acute respiratory tract infections (ARI) and other severe cases are referred by MSF-financed motorbike taxis to higher-level care, others by foot. Institutional delivery and the use of the maternity waiting home (MWH) at Kabo health centre (HC) are being promoted;
- 2) Four mobile health educators conduct health education, mortality surveillance, defaulter tracing and refer patients to CHWs or higher-level care;
- 3) Regular outreach activities for vaccination and antenatal care (ANC) in the rural periphery; 4) Community ARV groups (CAG) for patients on antiretroviral treatment (ART).

**Methods:** After an initial document review and primary interviews with MSF key informants in headquarters and the field, an evaluation protocol was developed. Further data was collected during a field visit from 17-27/9/2019 through a document review, site visits, semi-structured interviews, focus group discussions with MSF key informants, Ministry of Health and other health actors, CHW/TBAs, health workers, direct beneficiaries and community members. Routinely collected medical data was analysed retrospectively.

## Main findings and conclusions

**Relevance:** Given the population's difficulty in reaching facility-based healthcare due to periodic violence, insecurity, distance and lack of means for transport, the introduction of the DMC strategy was highly relevant to increase access to healthcare, particularly for vulnerable groups including children and pregnant and lactating women.

**Appropriateness:** The Kabo community strategy is characterised by an appropriate combination of: 1) community-based case management for the main killer diseases for children aged <15-years, and



systematic treatment for pregnant women; 2) an MSF-financed motorbike referral system to higher-level care for severe cases; 3) strong health promotion activities, defaulter tracing and mortality surveillance; 3) periodic decentralised activities for vaccination and ANC; 4) community participation and; 5) good geographical coverage of community treatment points on three main roads and in camps populated by the nomadic Mbarara people.

Some appropriate adaptations were made during the implementation. Other than originally planned, no antibiotic treatment of ARI is provided by CHWs and patients are referred to a health facility instead. Given the workload and the low capacity of the CHWs, mobile health educators were added after one year to strengthen health promotion, defaulter tracing and mortality surveillance.

Other than the WHO guidelines, target groups for community case management were initially expanded to include children aged <15-years (extending to adults during the malaria peak) and a package for pregnant and lactating women was added to the programme. Target groups, however, were reduced again after one year to <5-years and pregnant and lactating women, which was not consistent with the original strategy. Budget restrictions and supply problems were given as reasons for these changes. The disengagement of MSF from two health posts in 2017 weakened access to functional PHC facilities in the area. Budget limitation was given as the main reason for this operational choice. Partial reengagement in Farazala HP, with light support from MSF, was limited to the period of the malaria peak in 2018, but gaps in access to PHC on the Farazala road persist. There is also a lack of proper contingency planning for the supply chain to the community points.

Community participation, an element developed in the design stage, was central in achieving acceptance. However, there is still little community ownership or sense of responsibility to support CHWs. Efforts are made by MSF to respond to complaints from the community, but a confidential institutionalised feedback system is not yet in place.

Based on the needs identified through analysis of mortality surveillance data, home visits for postnatal care were added to the package in 2019. Several areas have recently been identified by the project team where decentralisation of services at the community level would be beneficial in order to increase access and coverage; namely ambulatory therapeutic feeding for malnutrition and care for survivors of sexual violence. Models for response at the community level are currently being discussed.

**Effectiveness:** Overall, after initial challenges due to insecurity and the temporary suspension of MSF activities in the periphery in 2017/2018, the new community strategy was effectively implemented with good results.

**Main observed changes that could be an effect of the new community strategy** (though other factors such as general improved security may have also contributed to some of these changes):

- Improved access to healthcare in the periphery;
- Changes in the perception of illness and health-seeking behaviour;
- A reduction of community-based mortality, hospital mortality for <5-years and CFR of malaria;
- Reduction of severe diarrhoea cases;
- Increased utilisation of the maternity waiting home;
- Access to ART also increased through the creation of CAGs, with a positive effect on adherence and viral suppression.

However, motorbike referrals are limited to severe cases, are not available on Sundays or at night, and not available on the Behili road. One third of the cases referred by foot still do not reach the health facility. Communities are highly appreciative of the improved access to healthcare and are satisfied with the quality of care provided by CHWs and at the referral health facilities. Main areas for improvement perceived by the community are; exclusion of adults, temporary stockouts of

medicines, limited number of motorbike taxis, lack of mosquito nets and lack of MSF support for the Farazala HP.

**Main challenges:** 1) Low education level of CHWs/TBAs that requires regular supportive supervision and refresher training; 2) Insecurity (especially in 2017/2018); 3) Budget limitations; 4) Distance and difficult road access/no motorbike referral on Behili road; 5) Unrealistically high number of patient consultations recorded at the community treatment points that should be investigated; 6) Insecurity and budget/staff restrictions limited the frequency of supervision activities; 7) Insecurity also affected regular supply to the community treatment points.

**Enabling factors for success:** 1) Good technical support from the community engagement advisor in the planning phase; 2) Determination of the country and coordination project staff to roll out the innovative community case management strategy in a systematic manner, supported and backed up by cell and technical advisors; 3) Good understanding of the local context; 4) Good negotiation skills with armed actors; 5) Long-term experienced Central African staff for training and supervision.

**Main recommendations** - *For more detailed recommendation see chapter 5.*

**For MSF Kabo project – MSF OCBA CAR mission**

- ⇒ Further strengthen CHW/TBA capacity.
- ⇒ Improve transport options for urgent referrals at night, on Sundays, on the Behili road and for referrals that do not fall under the motorbike referral criteria.
- ⇒ Strengthen health promotion activities.
- ⇒ Support free access to quality PHC to ensure the continuum of care.
- ⇒ Develop a contingency plan for supply and supervision of community treatment points during periods of insecurity.
- ⇒ Strengthen community participation and engagement.
- ⇒ Develop a community-based strategy for support of survivors of sexual violence, tailored to specific needs and context.
- ⇒ Engage with traditional healers and explore options to include them in the referral pathway.
- ⇒ Plan in time for potential future MSF exit and handover.
- ⇒ Investigate reasons for very high numbers of consultations at community treatment points.

**For MSF OCBA headquarters**

- ⇒ Finalise the community engagement strategy, the DMC toolkit and training materials and disseminate to the field. Create a mobile implementation officer position for DMC to provide technical support.
- ⇒ Develop a framework for improved monitoring of DMC activities at project, coordination and cell level, with baseline and follow-up indicators for the various expected results. Finalise integration of DMC activities in the health management information system.

## 2 Introduction

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### 2.1 Background and purpose

#### 2.1.1 Purpose and objectives of the evaluation

In response to the observed barriers that vulnerable people face when accessing healthcare (conflict, violence, displacement and/or distance to a health facility) and in line with their current strategic plan<sup>1</sup>, Médecins Sans Frontières (MSF) Operational Centre Barcelona Athens (OCBA) has been developing decentralised models of care (DMC) in various countries and projects. MSF OCBA understands DMC as the implementation of care outside health facilities and delivered in the community closer to patients, in order to make curative and preventive medical activities more accessible.

The design of a DMC strategy needs to be adapted to the context and the particularities of each specific situation and can comprise two main types of intervention:

1. **Community-based interventions:** Activities implemented by community health workers (CHW)/trained traditional birth attendants (TBA) in the community; these can include treatment for specific diseases and identification of danger signs. Severe cases are referred for higher-level care. The CHWs usually receive incentives and are members of the communities where activities are implemented. Their skill level is mainly low, and the number of activities should be limited to the skills.
2. **Decentralised interventions:** Activities implemented in the community, but which originated in the facility and are carried out by MSF staff with a higher skill level. This includes “one shot” interventions in areas with temporary access, mobile clinics, vaccination campaigns in the community, health promotion etc.

As DMCs become increasingly more relevant in MSF OCBA’s medical operations, this evaluation was commissioned to derive lessons learned from projects in Central African Republic (CAR), the Democratic Republic of Congo (DRC) and South Sudan, to improve community activities and inform decision-making for current and future DMC interventions.

**Specific objectives** are to evaluate:

- The effect of the community strategy in terms of access to healthcare;
- The consequences of the strategy on the workload of staff providing higher levels of care;
- The participation of the community in the planning (co-design) and implementation of DMC activities;
- Specific aspects of DMC interventions (design, implementation and set-up);
- Identify enabling and constraining factors during the implementation.

Relevance, appropriateness and effectiveness have been chosen as evaluation criteria. *For the detailed evaluation questions see terms of reference in annex 6.1.*

This report covers the case study of DMC implemented in OCBA’s Kabo project, CAR.

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<sup>1</sup> MSF OCBA. Strategic plan 2014-2017 and MSF OCBA. Extension of the strategic plan 2014-2017 (2 years)

## 2.1.2 Country and project context

Since late 2012, CAR has experienced a series of political unrest and armed conflicts, resulting in the seizure of power by the Seleka movement in March 2013, followed by a wave of extreme inter-community conflict and abuse against Muslims, that resulted in several thousand deaths, hundreds of injuries and hundreds of thousands of displaced people. After an interim government was installed in 2014, the Central Government was democratically elected in early 2016 but maintains little presence outside of the capital, Bangui.

Continuing violence, dysfunctional state institutions and years of poor governance, have resulted in a protracted and ongoing crisis despite a peace agreement between the government and 14 armed groups in February 2019.<sup>2</sup>

Armed groups continue to control parts of the country with frequent clashes, criminal acts committed by militias and targeted killing based on ethnicity the primary threats to civilians.<sup>3</sup> This includes attacks of health facilities, ambulances, health staff and patients.<sup>4</sup> Insecurity remains a barrier for humanitarian actors' access to people in need. The UN Office for the Coordination of Humanitarian Affairs (OCHA) estimates that in 2019, 2.9 million people (63 percent of the population of 4.6 million) are in need of humanitarian assistance.<sup>5</sup>

### Health situation

CAR health indicators are persistently low due to limited availability, functionality and accessibility of services outside Bangui. National under 5 mortality is estimated at 121/1,000 live births, infant mortality at 88/1,000 live births and national DTP3 vaccination coverage at only 47%.<sup>6</sup> Maternal mortality is estimated to be one of the highest in the world with 880/100,000 live births.<sup>7</sup> In 2010, antenatal care (ANC) coverage with four visits was 38% at national level and only 26% in Ouham prefecture where Kabo is located. Only 52% of women countrywide and 36% in Ouham prefecture had a skilled attendant at their delivery.<sup>8</sup> The HIV prevalence is estimated at 4.9%.<sup>9</sup>

Malaria is the primary cause for morbidity and mortality in CAR, particularly among children aged under five. In 2016, malaria was the reason for 65% of outpatient consultations among the general population, 62% of hospitalisations and 61% of deaths. Among children aged under five, malaria cases counted for 68 % of consultations, 71% of hospitalisations and 71% of deaths.<sup>10</sup>

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<sup>2</sup> International Crisis Group. Making the Central African Republic's latest peace agreement stick. 18 June 2019.

<sup>3</sup> Martinez, C. Central African Republic Health System Overview - Implications for MSF. Internal report. July 2018.

<sup>4</sup> MSF. Unprotected. Summary of internal review on the October 31st events in Batangafo, Central African Republic. February 2019.

<sup>5</sup> UNOCHA. *Aperçu des besoins humanitaires 2019*. République Centrafricaine. Octobre 2018

<sup>6</sup> UNICEF. *Central African Republic country profile*. <https://data.unicef.org/country/caf/> (retrieved 9/10/2019)

<sup>7</sup> Maternal Mortality Estimation Inter-Agency Group. *Maternal mortality in 1990-2015. Central African Republic*. [https://www.who.int/gho/maternal\\_health/countries/caf.pdf?ua=1](https://www.who.int/gho/maternal_health/countries/caf.pdf?ua=1) (retrieved 9/10/2019)

<sup>8</sup> *Central African Republic multiple indicator cluster survey*, 2010.

[http://www.countdown2015mnch.org/documents/2014Equity/CentralAfricanRepublic\\_Equity\\_2014.pdf](http://www.countdown2015mnch.org/documents/2014Equity/CentralAfricanRepublic_Equity_2014.pdf)

<sup>9</sup> UNFPA / Bangui and ICF International. *Prévalence de l'infection VIH et facteurs associés en République Centrafricaine en 2010*. Calverton, Maryland, USA: UNFPA/Bangui and ICF International. 2012.

<sup>10</sup> WHO. *Revue des performances du programme de lutte contre le paludisme en RCA : principaux résultats, recommandations et prochaines étapes*. December 2017

## Health system

The underfunded health system, already dysfunctional for years, has been further affected by the crisis: health facilities are understaffed, lacking drugs and are poorly managed. Institutional weakness and lack of MoH presence outside the capital and larger cities, has led to a fragmented health delivery system propped up by a number of different national and international actors.<sup>11</sup>

CAR is divided into seven health regions which correspond to administrative regions. Since October 2017, the country has been divided into 35 health districts under the leadership of district health teams. *See map 1 in annex 2.*

## Kabo area context

The town of Kabo has 13,637 inhabitants and is located in the Ouham prefecture, close to the border with Chad (60 km) and north of the provincial capital, Bossangoa (187 km). The distance to the capital, Bangui, is 370 km. Kabo is the “capital” of Kabo sub-prefecture and is located in Batangafo health district.

Due to its closeness to the Chadian border, Kabo has played a crucial role during past regional conflicts, including the Seleka rebellion in CAR from 2011 to 2014 (as a stronghold and recruitment area for the Seleka movement). As of today (October 2019), Kabo is still under the control of former Seleka rebels.

The high presence of armed actors and tensions between different population groups<sup>12</sup> in Kabo sub-prefecture has continued to exacerbate the volatile security context throughout the past years. Civilians and humanitarian actors, including MSF staff and the project base, have repeatedly fallen victim to armed robberies. Periodic violence, insecurity, distance from medical facilities and a lack of means for transport have restricted access to MSF-supported healthcare services for the population in the periphery. This has triggered the development of a variety of decentralised activities and resulted in the development of the current DMC strategy that was launched in 2017. However, security incidents have continued cause temporary partial suspension of MSF activities. Since the last quarter of 2018, no major security incident against MSF has been reported, but small criminal acts involving armed groups and conflicts between agriculturalists and Mbarara nomads have continued.

Kabo sub-prefecture officially belongs to Batangafo health district, but MoH presence is limited to two staff in Kabo health centre, one staff in Moyen Sido HP and the supply of vaccines and antiretroviral medications (ARV). In practice, MSF OCBA is the only health actor present in Kabo and Moyen Sido sub-prefectures providing healthcare for the whole population.

### 2.1.3 Project overview

MSF OCBA has been present in Kabo since 2006. The project target area covers Kabo sub prefecture and part of Moyen Sido sub prefectures, with an estimated population of 66,234. *See also the table with project overview in annex 6.4. For the Kabo sub-prefecture and the geographical distribution of CHW treatment points and health facilities see maps in annex 6.2.*

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<sup>11</sup> Martinez, C. Central African Republic Health System Overview - Implications for MSF. Internal report. July 2018.

<sup>12</sup> Local farmers, local residents with Arabic origins and nomadic pastoralists (Mbarara tribe), internally displaced people (IDPs) and returning refugees from Chad

## Project components:

### 1. Community healthcare

- **A network of 31 community-based treatment points managed by CHWs** on incentives, distributed over 24 villages along four main roads (Moyen Sido, Farazala, Gbazara, Behili) and seven camps (fériks) for the nomadic Mbarara community (started in March 2017). Teams consisting of one male CHW and one trained TBA, provide treatment for uncomplicated malaria and diarrhoea for children aged under 15-years and pregnant and lactating women, iron/folate supplementation, deworming and preventive malaria treatment for pregnant women, screen for malnutrition and conduct health promotion activities. On the Gbazara road, postnatal services were added to the programme in May 2019. ARI and other severe cases are referred by MSF-financed motorbike taxis, others by foot. Hospital delivery and the use of the MWH at Kabo health centre (HC) are being promoted.
- **A network of 14 health educators** provide health education, mortality surveillance, defaulter tracing and refer patients to CHW or for higher-level care. Four mobile health educators cover the villages on the four main roads. The other ten cover Kabo and Moyen Sido towns, the IDP camps and the two MSF-supported health facilities.
- **Regular decentralised interventions** (on the four main roads) focus on preventive activities which include vaccination, ANC, passive screening for acute malnutrition, a small curative care package for emergency cases for malaria and diarrhoea, and the referral of severe cases for higher-level care.
- **Community ARV groups (CAGs)** for people living with HIV (PLHIV) on antiretroviral treatment (ART), meet regularly for adherence support. One member is responsible for the collection of ARV for their group at Kabo HC every two months. This reduces travel and waiting time for the patients. Currently, there are nine CAGs in the periphery and 12 CAGs in Kabo town.

### 1. Primary healthcare

- **Support to one primary healthcare (PHC) facility, Moyen Sido health post (HP)**, fully staffed and managed by MSF except for one MoH member of staff.

Up until March 2017, MSF supported two further PHC facilities, Gbazara and Farazala HPs. Gbazara HP was handed over to the international NGO, MENTOR. In Farazala HP, the local management committee (*committee de gestion - COGES*) was reactivated and a cost recovery system was reintroduced. Temporary light MSF support for children aged under five and pregnant women, was provided in Farazala HP during the 2018 malaria peak (July – November 2018).

### 2. Secondary healthcare

- **Support to one secondary health facility, Kabo MoH HC**, remodelled into a hospital by MSF with maternity, paediatrics, internal medicine, surgery and a maternity waiting home with an attached outpatient department (OPD). The OPD covers PHC, HIV treatment and mental health services. The facility is nearly 100% funded, staffed and managed by MSF under the official administrative leadership of an MoH HC director.

### 3. Emergency preparedness and response (e.g. outbreaks).

## 2.2 Methodology

### 2.2.1 Evaluation design – data collection and methods

The overall evaluation design is based on a mixed methods case study design. Qualitative methods were used alongside quantitative retrospective analysis of secondary medical data routinely collected at project level.

Qualitative data collection took place primarily during a field visit to Bangui and Kabo between 17 and 27 September 2019, complemented by a number of Skype interviews, and was carried out by a team of two evaluators. Retrospective analysis of routinely collected medical data was conducted off-site by an epidemiologist with input from the field evaluators.

Data was collected through:

- **Review of key documents:**<sup>13</sup> MSF project documents, annual plans and reports, head quarter field visit reports, research reports; national survey reports, policy documents, national health statistics and context documents as a secondary source of information.
- **Interviews and focus group discussions**<sup>14</sup>
  - ✓ **Semi-structured individual interviews** with key MSF informants (headquarter, country coordination, project team), key former MSF staff, health workers, and brief interviews with patients at Kabo HC (n=63).
  - ✓ **Interviews with groups of two:** with CHW/TBA teams of three villages in three of the four roads, with two nurses and two patients (n=5).
  - ✓ **Focus group discussions (FGD)** with community leaders/members (male and female separately), CHWs from the nomadic Mbarara communities, CHWs from the Behili road, MSF health educators, representatives from CAGs COGES and health workers from Farazala HP (n=11)

Interview guides were developed for each group of interviewees, covering the respective relevant evaluation questions.<sup>15</sup> Notes were taken and parts of the interviews were recorded when agreed. To facilitate communication with interviewees who didn't speak French, female and male interviewers were hired by MSF and trained on-the-spot by the evaluators.

- **Site visits** to three CHW-run community treatment sites – one on each of the three roads, Kabo HC, Moyen Sido HP and Farazala HP.
- **Analysis of medical data:** routine monitoring data was analysed retrospectively.
- **Feedback workshop** with MSF project staff and feedback meeting with country coordination staff at the end of the field visit, to present and receive input for the first preliminary qualitative findings.

**Sampling for the qualitative data collection:** key informants were sampled purposively, others on convenience depending on their availability during visits to health facilities. For site visits, a typical sample of three community treatment sites along three main roads was selected, including higher performing and lower performing sites (based on the MSF assessment of CHW/TBA capacity). The sample also included a site visit to the Gbazara road, where postnatal visits have been recently

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<sup>13</sup> See list of documents reviewed in annex 5.6

<sup>14</sup> For the list of interviewees see annex 5.9

<sup>15</sup> See MSF. Evaluation of decentralised models of care in DRC, CAR and South Sudan: Evaluation Protocol. September 2019.

included in the TBA’s responsibilities. The two MSF-supported health facilities, Kabo HC and Moyen Sido HP, and the formerly supported Farazala HP, were all visited. The Behili road and Mbarara camps that could not be visited were covered through focus group discussions with CHWs from those sites. *For details of the sampling strategy for the selection of interviewees and site visits see annex 6.3.*

## 2.2.2 Data analysis

**Analysis of qualitative data:** Summaries of interviews were transcribed into a Word document by evaluators, to support data management. Data was screened for relevant information, then coded using NVivo and Atlas software, categorised and analysed for content according to the evaluation criteria and questions, and interpreted jointly by the two evaluators. Triangulation of the different sources of qualitative information was used for the validation of the qualitative findings. Early feedback for validation on preliminary qualitative findings was sought during debriefing sessions with the project and country coordination teams.

### Quantitative data

#### *Data sources*

- MSF health management information system (HMIS) database for medical data collected at health facilities
- Excel database of community health workers and health promotor activities
- Population figures originated from the “Report Kabo Epi weeks 1-36 2018”
- Number of CHWs originated from “18.10.2019 ASC distribution report”
- October 2019 report on CAGs
- September 2019 line list of the Kabo HC maternity waiting home
- Database of mobile clinics 2018 and 2019

#### *Community data analysis*

Excel data from community activities was merged. This included data from:

- Week 16 to week 52 for 2017
- Week 1 to week 52 for 2018
- Week 1 to week 28 for 2019

The proportion of patients who arrived on referral was calculated and stratified by method of travel (foot or motorbike). Crude mortality rate (CMR) and U5MR were calculated according to the following population figures for 2018 provided by MSF OCBA.

Targeted areas/groups	Gbazara	Farazala	Moyen Sido	Camps	Behili	Total
Population outside the direct catchment of health facility (> 5 km)	6,513	6,489	2,570	1,141	834	17,547
Children <5-years in this population	1,042	1,038	411	183	396	3,070

Ninety-five percent of confident intervals (CIs) were calculated with normal distribution for numbers >30 and with Poisson distribution for numbers <30. CIs were used to assess the difference between years and age groups.



## **Health facility data analysis**

### *Selection of the data*

- As DMC activities were launched in 2017, we used data in 2016 as a proxy indicator for comparison with the following years (2017, 2018, and 2019) when activities were running. In order to also include data from 2019 for comparison, we **limited our analysis to the period of January to September** of each year.
- We also **limited our analysis to Kabo and Moyen Sido health facilities**, as they were the only health facilities supported by MSF throughout the four years.
- We selected the following health services:
  - *For OPD*: external consultations, paediatric external consultations, gynaecology/obstetrics external consultations, emergency room, observation room, ambulatory therapeutic feeding centre (ATFC).
  - *For inpatient department (IPD)*: hospitalisation ward, paediatric ward, surgical ward, gynaecology/obstetrics ward, intensive care unit/paediatric intensive care unit (ICU/PICU), inpatient therapeutic feeding centre (ITFC).
- Age groups included: 0 to <5-years, 5 to 15-years and  $\geq 15$ -years

### *Calculation of the indicators*

- We calculated the indicators for each year and each age group.
- We calculated the total number of OPD consultations and IPD admissions.
- We calculated the hospital mortality rate (in %) by dividing the number of deaths by the number of IPD exits.
- We calculated the early hospital mortality rate (in %) by dividing the early number of deaths ( $\leq 48$  hours) by the IPD exits.
- We calculated the malaria case fatality ratio (CFR) (in %) by dividing the number of malaria deaths by the number of severe malaria cases in inpatient department (IPD) services.
- We calculated the proportion of IPD cases among all cases (IPD + OPD) for acute non-bloody diarrhoea and bloody diarrhoea separately.
- Ninety-five percent of confidence intervals were calculated by using the normal distribution, and they were used to assess the difference between years and age groups.

**Finally**, triangulation of the qualitative findings with the results of the quantitative analysis of the medical data was used to further validate evaluation findings.

### **2.2.3 Ethical considerations**

After an explanation of the evaluation, its objectives and procedures, the free decision to participate and withdraw from the interview at any time and the assurance of anonymity in the report, participants provided verbal consent. Translators were trained in informed consent and the importance of maintaining confidentiality was emphasised. An ethical review exemption had been obtained by the Medical Director from MSF OCBA, as well as by the MoH in CAR.

## 2.3 Limitations

### Limitations for qualitative data collection and analysis

- Short time for fieldwork combined with long travel time to reach visited sites and security restrictions, meant that the number of visits to community treatment sites had to be limited to three. To try and counterbalance this weakness, evaluators made an effort to select a typical sample of higher and lower performing sites (based on feedback from MSF project staff) – one each on three out of the four main roads.
- Due to time and road access constraints, the Behili road could not be included. Instead, CHWs were invited to Kabo for a focus group discussion. As MSF has no direct access to the camps populated by the Mbarara nomadic community, the CHWs from those camps were invited to Kabo for a focus group discussion. In both cases, no further focus group discussions with other members of these communities could be held. Thus, with regards to community perception of the effects of the community-based care for these target groups, the evaluation had to rely on indirect information provided by CHWs or MSF key informants.
- Observation of CHW/TBA work was impossible, as no patients sought care during the site visits. Findings on the capacity of CHWs are therefore exclusively based on indirect information provided by MSF key informants.
- The urgent referral of a patient required adaptation of the planned visit/interview schedule. As a consequence, time for visits to two out of the three villages was considerably shorter than planned, and the visit to Gbazara HP had to be cancelled. The short duration of the visits affected the depth of the interviews and the assessment of two out of the three CHW treatment points.
- Response bias cannot be excluded, as evaluators may have been perceived as MSF staff. Evaluators tried to reduce this bias by explaining their role, ensuring anonymity and proactively encouraging interviewees to be open and critical of MSF where required.
- Translation may have caused a bias of some findings from interviews with community members and direct beneficiaries.
- Recall difficulties combined with the high turnover of international staff, made it difficult in some cases to establish a precise timeline for events and precise reasons for changes in strategy (e.g. regarding the age bracket of the target groups).
- Due to the short time for data collection, the validity of the information on health-seeking behaviour is limited. Moreover, no baseline information was available.

### Limitations for quantitative data analysis

- HMIS data did not provide information on the origin of the cases or if they benefitted from DMC activities prior to the use of higher-level care. For this reason, it was impossible to stratify our analysis on the DMC target population, which limited the possibility to specifically analyse the direct effect of DMC activities at the health facility level. Some of the positive effects of DMC activities could therefore be hidden by the rest of the population that was not targeted by DMC activities.
- We had no control group that would be a comparable sub-prefecture without the same strategy. This means that external factors – i.e. epidemiological secular trends (for instance, decrease in malaria incidence) or improved security (which may have improved access to health facilities) – could not be fully taken into account. Instead, we used 2016 as baseline for comparison. We also compared the three different age groups per period of analysis.

- We used data from January to September in order to also compare 2019 with the previous years. As seasonality of infectious diseases can change from year to year, comparisons over the years may not have captured the same epidemiological patterns. This also reduced the number of cases and the power of our analysis.
- We used data from Kabo and Moyen Sido health facilities only because these health facilities were supported throughout the whole evaluation period. However, this does not capture the full picture of the work conducted by other health facilities, and the benefits they might have experienced from the DMC strategy. It also reduced the number of cases and the power of our analysis.
- The reliability of community mortality data is limited. This type of data is challenging to collect and is prone to underreporting and information bias.
- Data from the MWH was only available for 2019, and the number of admissions could not be compared with 2017 and 2018.
- Viral load data from PLHIV on ART was only made available to evaluators for patients enrolled in CAGs and could therefore not be compared with patients receiving ART through individual follow-up.

## 3 Findings

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### 3.1 Relevance

The Kabo community strategy was developed as a very relevant response to the lack of access to healthcare caused by periodic violence, insecurity, distance from health facilities and limited availability of transport. The initial health facility-based approach, implemented in 2006, neglected a large part of the population in the periphery who were unable to access MSF-supported health facilities. The design of the Kabo project strategy eventually evolved into a more pertinent combination of 1) facility-based healthcare; 2) decentralised preventive activities; 3) a network of well distributed community treatment points staffed by CHWs/TBAs, that provide treatment for vulnerable groups with a defined package of care for main killer diseases and systematic treatment for pregnant women; 4) a functional referral system from the community to higher-level care; 5) community ARV groups responding to access problems for HIV patients.

#### **Historic development of decentralised activities in Kabo project**

Following the conflict in 2013/2014, persisting periodic violence, insecurity, distance from health facilities and a lack of means for transport have restricted access to MSF-supported healthcare for rural communities in the periphery. MSF's facility-based service only covered people in the direct catchment area, while the majority of the rural population in the periphery remained neglected, with anecdotal reports of high morbidity and mortality.

As of 2014/2015, an analysis of the situation triggered the implementation of various decentralised activities in MSF OCBA's CAR operations. This eventually resulted in the development of the current community strategy, implemented in 2017 in Kabo and Batangafo projects.

In 2014, MSF launched decentralised activities with a preventive health package, including seasonal mass malaria chemoprevention for vulnerable populations in this highly endemic region.

In the same year, "one shot" activities started to be implemented as an outreach strategy during moments of relative calm in this highly insecure context, in order to reach rural communities in the periphery. The package was primarily preventive: vaccination, ANC including preventive malaria treatment, and mosquito net and soap distribution. A small-scale curative package for acute cases and referral of complicated cases was also added. Thanks to the "one shot" strategy, more people in new locations were able to access healthcare, than by exclusively offering care in fixed health structures.

#### **The new 2017 community strategy**

In 2016, the situation was still volatile, and the "one shot" model developed into the current community strategy. As a first step, community-based malaria treatment points (*maisons des agents curatifs*) were opened during the malaria peak, which had a good impact on the number of complicated malaria cases admitted to Kabo HC.<sup>16</sup> Encouraged by these results, the current, more comprehensive community strategy was designed in 2016 (and implemented in April 2017) to further improve the access to healthcare for the population outside of Kabo town.

The new community strategy<sup>17</sup> was designed with support from MSF OCBA's humanitarian anthropology/health promotion/community engagement advisor<sup>18</sup>. The operational cell and

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<sup>16</sup> MSF. Rapport MAC. Maison des Agents Curatifs dans la sous-préfecture de Kabo (Agents de Santé Curatif) Juillet à Septembre 2016. 2016

<sup>17</sup> MSF OCBA. *Stratégie communautaire. OCBA 2017*

various technical advisors from the medical department were also involved in the design, and there was a strong community engagement approach with the inclusion of the Mbarara nomadic population, and clear criteria for the selection of villages and CHWs.

In addition to the “one shot” outreach model, the support of the PHC facility Moyen Sido and the OPD and IPD in Kabo HC, the new strategy also included permanent community-based treatment points. These were set up on the four main roads in the periphery and in camps populated by nomadic communities. This was a substantial and relevant improvement in accessibility to treatment for the population in the periphery.

To ensure good geographical accessibility, careful attention was taken when selecting the community treatment points, so that the population would not have to walk more than 5 km to reach the next community treatment site or a health facility. The specific situation of the nomadic Mbarara population was also taken into consideration by recruiting CHWs/TBAs from inside the camps who would move with their community.

Community treatment points were staffed by teams of one male CHW and one female TBA, paid with incentives and chosen from inside the communities to ensure permanent presence – an additional advantage in case of insecurity or displacement. This was very relevant given the volatile context. The recruitment of a female TBA alongside a male CHW was believed to be important in order to gain trust, increase acceptance from pregnant women and achieve better coverage of ANC, institutional delivery and postnatal care.

CHWs were trained to provide a defined curative and preventive healthcare package for vulnerable groups including children <15-years, pregnant and lactating women, and for adults during the malaria season in 2017. The package includes diagnosis and treatment of uncomplicated malaria and diarrhoea, identification of acute respiratory tract infections (ARI) and referral of all complicated cases to higher-level care. Passive screening for acute malnutrition and referral, and systematic preventive malaria treatment, iron/folate supplementation to prevent/treat anaemia and deworming for pregnant women were all added. This was a very relevant package for first point-of-care in the community, given the priority health needs aiming at reducing mortality among the most vulnerable groups throughout the year, and all adults during to malaria peak. It was complementary to the preventive “one shot” decentralised activities that continued whenever possible.

A daily transport system with motorbike taxis paid for by MSF was included as an essential component of the strategy. This allowed for timely referrals of complicated cases from community treatment points to higher-level care, which was very pertinent to ensure the continuum of care for patients.

In order to enhance the preventive and curative activities, health promotion and epidemiological surveillance was strengthened. This was pertinent given that the role of MSF-hired health educators in the past had been too often limited to collecting relevant security information, and general health promotion activities had been neglected. The new job description included health promotion, epidemiological surveillance, defaulter tracing, nutritional screening, promotion of ANC and institutional deliveries, and referrals. For communities on the roads in the periphery, the package was initially added to the CHWs/TBAs tasks.

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<sup>18</sup> MSF OCBA. Rapport de visite RCA 14-16 Octobre 2016, référent promotion de la sante, anthropologie et engagement communautaire.

## Community ARV groups

At the same time, high numbers of lost-to-follow-up patients among PLHIV on ART in Kabo HC was identified as a problem. Distance from a health facility and other security-related access barriers were part of the underlying reasons. The creation of CAGs aimed to reduce the burden for PLHIV when travelling for monthly ARV refill visits at the HC, which was very relevant.

## 3.2 Appropriateness

### 3.2.1 Appropriateness of the strategy - adaptations in the approach

The community-based treatment package provided by MSF in Kabo, was inspired by the WHO guidelines on integrated community case management. However, other than planned, no antibiotic treatment of ARI is provided by CHWs due to their limited capacity and fear of antibiotic resistance. Target groups were initially (appropriately) expanded to children <15-years (and to adults during the malaria peak), and a package for pregnant and lactating women was added and complemented with postnatal visits in 2019. Target groups, however, were reduced after one year which was not consistent with the original strategy.

The decision to disengage from two PHC facilities weakened the access to PHC and caused much internal debate. In 2017, insecurity led to the temporary suspension of activities in the periphery, including CHW supervision and drug supply. A proper contingency plan is still pending. Mobile health educators were appropriately added after one year to complement case management conducted by CHW.

### Appropriateness of the MSF OCBA Kabo community case management model

The main innovation for MSF OCBA in CAR was the incorporation of teams consisting of one male CHW and one female TBA from, who provide a defined package of care within their community. *See also section 3.1.*

Community-based treatment delivered by CHW for children <5-years, was in line with the WHO and UNICEF recommended policy of integrated community case management (iCCM) for uncomplicated malaria, pneumonia and diarrhoea and detection of severe malnutrition in children <5-years, in areas with low health facility coverage.<sup>19</sup> It was also in line with the national policy that was being developed at the time, with support of UNICEF and strong input from MSF and other actors in CAR.<sup>20</sup> The draft policy is currently under review – with input from MSF.<sup>21</sup>

However, compared to the national policy a few appropriate adaptations have been made to MSF OCBA's 2017 community strategy in CAR. The target group was increased to children aged <15-years, as they were also considered vulnerable. Pregnant and lactating women were added to the target group for systematic preventive and curative malaria treatment, iron folate supplementation for anaemia and deworming (according to national ANC protocols) in order to reach the maximum number of pregnant women in the periphery with high impact interventions. The initial strategy had also planned for the inclusion of adults during the malaria peak. These adaptations of the WHO

<sup>19</sup> WHO/UNICEF. *Joint statement. Integrated Community Case Management (iCCM)*, retrieved from:

[https://www.who.int/maternal\\_child\\_adolescent/documents/statement\\_child\\_services\\_access\\_who/whounicef.pdf](https://www.who.int/maternal_child_adolescent/documents/statement_child_services_access_who/whounicef.pdf)

<sup>20</sup> Ministère de la Santé, de l'Hygiène Publique et de la Population. Guide de mise en œuvre de la Prise en Charge Intégrée de la Maladie de l'Enfant au niveau Communautaire. Draft. 2016.

<sup>21</sup> MSF OCBA and OCA are part of the technical working group in charge of finalizing the national strategy. They shared experience and are advocating for a model that is appropriate for the context of CAR.

iCCM approach were appropriate given the difficulty people were facing to access curative healthcare and ANC services in the periphery.

Given the limited capacity/low education level of the CHWs, and the fear of antibiotic resistance, a further appropriate adjustment was made after the introduction of the programme. Other than originally planned by MSF and in the WHO guidelines, no antibiotic treatment of ARI is provided by CHWs, and patients are instead referred to a health facility.

Home visits providing postnatal care for mothers and newborns by TBAs and referrals of complicated cases were added in 2019. This was following analysis of mortality surveillance data from the neighbouring project in Batangafo, which indicated an increased number of neonatal and maternal deaths.

### **Changes in target groups for community case management**

Over the past few years, several changes have been made to the age brackets in the target group for community case management, not all of them in line with the initial strategy. *See table 1 below.*

<b>Year</b>	<b>Target groups</b>
2017	<15-years, pregnant & lactating women; adults during malaria peak
2018 – June 2019	<5-years, pregnant & lactating women
July 2019	<15-years, pregnant & lactating women

**Table 1: target groups for community case management**

The reasons for the reduction of the target groups in 2018 could not be explained with certainty. The increase in the age bracket in mid-2019 was approved by the operational cell based on the upcoming malaria season. The reason why adults were not included during the malaria peak in 2019 could not be fully clarified.

Communities have difficulties understanding why the age brackets of target groups for community case management are limited, as everyone has difficulty accessing healthcare.

*“MSF should also do something for the old people. Only women and children are treated.”*  
(FGD with men in community)

MSF key informants assumed that either budget restrictions or supply challenges for rapid tests and antimalarials were the reasons for the reduction in the age brackets, and the non-inclusion of adults during the malaria peak in 2018 and 2019. So far, all MSF operational centres in CAR have been procuring supplies for malaria diagnosis and treatment using MSF funds, a high burden on budgets. MSF is currently exploring the option of receiving medications and supplies through the existing Global Fund and UN-financed supply chain for CAR.

### **Disengagement of PHC facilities – Farazala and Gbazara health posts**

#### *Consequences for access to PHC*

With the launch of the new community strategy, MSF withdrew support from two out of three PHC facilities in March 2017. Gbazara HP was handed over to MENTOR, and the management of Farazala was taken over by the COGES and the cost recovery system was restarted. Moyen Sido HP remained under MSF support. MSF’s budget constraints were the reason for the withdrawal. However, Farazala HP has been unable to function with a cost recovery system and MENTOR has not been able to assure uninterrupted drug supply in Gbazara HP. This has created a gap in access to PHC for the direct catchment population, and a gap in the continuum of care for patients referred from the community. As a result of MSF’s disengagement, both HPs became non- or only partially functional.

MSF's 2017 annual report acknowledges that Farazala HP was underutilised due to cost barriers. Today, many of the few patients who come to Farazala HP for care, are unable to pay even the small consultation fee of 50 XAF for children and 100 XAF for adults.<sup>22</sup> Farazala health workers reported that some MSF-donated drugs had expired because the HP remained underused. During the evaluation visit, the Farazala HP pharmacy was nearly empty and no antimalarials were available. Health workers reported that although the few patients who do come for consultations leave with drug prescriptions, they must look for drugs sellers in the market. Others seek care at MSF community treatment points in neighbouring villages, in Kabo HC, or in Ouandago HC which is further south in Kaga Bando prefecture and is supported by the ICRC.

In Gbazara HP, MSF key informants and community members reported that MENTOR continues to have difficulties in assuring regular drug supply and supervision. The difficulties were compounded by security incidents in Batangafo. Their team had to be relocated to the far more distant Bossangoa, making regular visits even more difficult.

#### *Debate on MSF's operational choice*

MSF's decision to withdraw support from Farazala and Gbazara HPs and prioritise community-based activities caused a lot of controversy at headquarters and country level. While some interviewees explained that budget constraints had forced MSF to make this difficult operational choice, others said that there was a "false" perception that community-based medical activities could "replace" PHC facilities.

While it seems likely that MSF may have had a bigger impact by creating multiple community-based treatment points than by maintaining the support for these two PHC facilities, the capacity of the handover partners has been overestimated, and the risk and negative impact on the continuum of care has been underestimated.

Given the cost barriers and negative consequences on service utilisation observed in Farazala HP, MSF reengaged with light support during the malaria peak in 2018, which was appropriate.<sup>23</sup> In 2019 however, this support was unfortunately not repeated. Farazala HP still has access to free motorbike taxi referrals, and community visits by MSF's mobile health educators continue. In 2019, given the continued under-utilisation of Farazala HP, the mission has appropriately proposed light support to COGES in the 2020 annual plan.<sup>24</sup>

#### **Absence of contingency planning for MSF suspension of activities in the periphery**

The appropriateness of the community strategy during periods of insecurity was put to the test soon after its launch in March 2017, when MSF suspended operations in the periphery for three months (mid-April to mid-July 2017) following an armed robbery in the Kabo base. The first CHWs had just been trained, but their supervision had become impossible. It was also not possible to supervise Moyon Sido HP during this period, and Gbazara and Farazala HPs had been handed over.

There was no contingency plan in place for this situation, although a former coordination staff member recalled that the option to leave a contingency stock of medicines was discussed with the community chief. Some CHWs were able to travel back to the base for supplies, but others were robbed on the way, or simply couldn't make the journey at all. According to some MSF key informants, large areas in the periphery went without proper access to healthcare during this period:

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<sup>22</sup> 100 XAF = 0.15 €. During the HP visit, evaluators counted 79 booklets of patients who had debts from consultation fees.

<sup>23</sup> MSF support consisted of supply of medicines and rapid tests for malaria, diarrhoea, IRA for children < 5 years and pregnant women.

<sup>24</sup> Free care for children <15 years, sexual and reproductive health and emergencies and, drug supply for these groups and staff incentives.



*“The strategy was designed for a period of relative calm, but we were too optimistic. 2017 was a very difficult year. (...) This risk had not been identified when the strategy was defined (...) “We tried to adapt but we were very limited due to conflict”. “We tried to bring the CHWs to the hospital, we tried alternative ways of sending medicines safely, but it was very difficult, some came for supply, but they were robbed.” (Former MSF field staff)*

Since the last quarter of 2018, the situation in Kabo has remained relatively calm and the community-based programme has been properly implemented. But an appropriate contingency plan (beyond the assumption that CHWs will be able to make their way to town to get supplies when MSF cannot reach their community) is still pending. Providing runaway backpacks with contingency supply stock was recommended recently during the cell’s health advisor visit to Batangafo project. This might be an appropriate solution, but it will be important to analyse the potential risks of the runaway backpacks together with CHWs and community leaders, to jointly identify the most appropriate solution.

### **Adding mobile health educators on the main roads**

While the original community strategy planned that tasks for CHWs/TBAs from the community should include health promotion, epidemiological surveillance and defaulter tracing in their catchment area, this approach was changed in July 2018. Lessons learnt from the first year of implementation showed that CHWs/TBAs were not able to cover all the additional tasks. To respond to this, one mobile health educator per road, who visits each of the communities once a week, was added. This was an appropriate adjustment to the strategy; MSF staff and community participants confirmed that this model works well, and that community-based surveillance and home visits for defaulter tracing and referrals have improved.

## **3.2.2 Response to new health needs**

Based on the analysis of mortality surveillance data, postnatal visits were added to the package in 2019. Ambulatory therapeutic feeding for malnutrition and care for survivors of sexual violence were identified as further areas that should be decentralised.

Postnatal care for early detection of complications and referrals to higher-level care at the community level were appropriately added to the package provided by TBAs, after the analysis of community mortality surveillance data in Batangafo and Kabo showed elevated numbers of maternal and neonatal deaths.<sup>25</sup>

Under the current model, passive screening for malnutrition with MUAC is included in the CHW package, but children aged <5-years with signs of severe acute and/or moderate acute malnutrition (red or orange MUAC or oedema) still need to be referred to a health facility. In 2018, 33 children with severe malnutrition and 221 with moderate acute malnutrition were identified at the community level. From January to September 2019, 22 children with severe malnutrition and 85 with moderate acute malnutrition were identified at community level. To improve access to nutritional care, MSF is therefore considering integrating ambulatory therapeutic feeding at community level on the days when CHWs/TBAs are supervised by the periphery nurse supervisor. While it is appropriate to decentralise nutritional care, given the access barriers and reported food insecurity (due to destruction of fields by cattle owned by the nomadic population), this should have been considered a year earlier, given the reported figures.

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<sup>25</sup> Dvorzak. J.L. Kabo (CAR) Visit Report, September 11 to 20 2018, and Dvorzak. J.L. Analysis of Mortality in Batangafo. Periphery CAR epi W24-42 2018

From January to August 2019, 25 survivors of sexual violence sought medical care at Kabo HC and only 56% of those arrived within 72 hours – the time limit for post exposure prophylaxis of HIV infection.<sup>26</sup> MSF estimates the number of unreported cases is much higher due to fear of stigmatisation, lack of information about available medical care and mental health support for survivors.

In one of the focus group discussions with women, participants mentioned sexual violence was one of their main concerns. Inspired by projects in DRC and after a preliminary assessment carried out in September 2019, MSF has started to explore the option of training trusted TBAs as frontline focal points for survivors of sexual violence in the community. The idea is to train TBAs and equip them with emergency contraception and ARVs for post-exposure prophylaxis of HIV infection, to avoid delays in accessing preventive treatment. While this is a relevant and appropriate step, it will be important to carefully explore the most appropriate and acceptable options with communities/potential beneficiaries.

### 3.2.3 Community participation

Even though the programme was not co-designed by communities, a big effort was made in informing, consulting and involving the community during the launch of the programme. The degree of community participation varied over time, according to staff capacities and priorities. However, despite initial efforts, there is still little community ownership and responsibility for the support of the CHWs. Efforts are made by MSF to react to complaints of the community, but a confidential institutionalised feedback system is not yet in place.

#### **Community participation<sup>27</sup> in the design and planning phase**

The needs identification and design was led by MSF with support from OCBA's Humanitarian Anthropology, Community Engagement and Health Promotion Advisor. After a field visit in October 2016<sup>28</sup> this community strategy<sup>29</sup> was approved and incorporated in the 2017 annual plan and a lot of time was invested in this preparatory phase. The launch was carefully planned and included a broad process of consultation with different stakeholders: 1) negotiation with armed groups to facilitate the movement of staff and CHWs at checkpoints; 2) organising meetings with village chiefs from community point locations to explain the strategy and the criteria for selection of the sites – chiefs of villages that were not selected were also invited to ensure community acceptance; 3) follow-up community meetings in each selected village.

Community participants in a FGD with men have good memories of the consultation process: *“MSF came to talk to the (village) committee; they told us that all villages had to select CHWs.” “They asked our opinion and we thought it was a good idea because now we have our own health workers.”*

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<sup>26</sup> MSF. Proposition stratégie violence sexuelle Kabo. September 2019

<sup>27</sup>The term ‘participation’ is often used interchangeably with ‘engagement’; participation is the most common form of engagement discussed in the literature. One of the earliest humanitarian definitions appears in the ALNAP handbook *Participation by Crisis-Affected Populations in Humanitarian Action*.

<sup>28</sup> For more details see *Rapport de visite RCA 14-16 Octobre 2016, référent promotion de la sante, anthropologie et engagement communautaire*.

<sup>29</sup> MSF OCBA. Stratégie communautaire OCBA 2017

The initial recruitment process for CHWs and TBAs is an example of good practice of community participation and joint collaboration:

#### **Process of recruitment CHW-TBA during the preparation phase**

- First meeting with the village committee asking to identify three appropriate volunteers for each post (fulfilling a set of criteria);
- The chief calls a village assembly to select candidates among several volunteers. The assembly selects their candidates in the traditional manner (standing behind their favourite candidate);
- MSF tests three candidates per position. The leader is present. Written test for CHW, oral questions for the TBA;
- The selected candidates are presented to the community in a village assembly.

Another strong point was the inclusion of sedentary and nomadic groups.<sup>30</sup> From the beginning, MSF has included the recruitment of CHWs and TBAs in Mbarara camps and showed willingness to make culturally acceptable adaptations in the set-up for supervision and surveillance.<sup>31</sup>

#### **Community participation during implementation**

Throughout the implementation phase, MSF staff showed willingness to ensure community participation. However, it's not an area of MSF's expertise (as acknowledged during the interviews) and there has been insufficient advisory support.<sup>32</sup> Consequently, the level of community participation has varied depending on the expertise and time dedicated by international staff. In some cases, MSF staff understanding of community participation has been limited to 'talking to the village chief' and in general, there seems to be little awareness of the complexities of power dynamics. Engaging with women is still a pending issue. In one FGD with women, a member of a women's organisation said, "*we have a lot to say but there is no way to do it*".

Some planned activities were not implemented or further developed, and other examples of good practice were modified over time. For example: 1) planned community committees for the management and monitoring of CHWs were never set up; 2) the recruitment process for CHWs was changed and contrary to the good practice at the beginning of the programme, the new CHWs/TBAs for Behili road were only selected by the chief, without further community involvement or tests by MSF; 3) engagement with traditional healers is not sought.

Despite the varying level of engagement with communities sought by international staff, the presence of experienced and motivated long-term Central African staff has ensured continuous exchange and dialogue with the community. Central African staff play a key role in keeping the community engaged with the programme. As a result, there is good community appreciation and a certain sense of community ownership of the CHW-TBA teams: "*The CHW are our health agents*", is a sentence that was often heard during visits to the villages.

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<sup>30</sup>A detailed information on ethnic groups can be found in Paul Grohman's "*An anthropologist visit to the projects of MSF OCBA in CAR*".

<sup>31</sup> Visits of outsiders who do not belong to their community are not accepted by Mbarara communities. Therefore MSF cannot enter their camps for supervision visit or epidemiological surveillance. Instead it was mutually agreed that CHW bring their records biweekly to MSF, where they receive also new supplies.

<sup>32</sup> Due to staff gap in headquarter DMC advisor post since 2018

### Community participation and monitoring<sup>33</sup>

Efforts have been made to consider the feedback of the local population, but a formal feedback system at the community level – that could channel community concerns while guarantying confidentiality – is not yet in place. So far, feedback has been collated in a reactive way. MSF staff gave several examples: *“If somebody complains, we discuss, explain and we try to find solutions.”*; *“The community raised the issue of the target group and we have increased it from under 5 to under 15”*.

The communities also acknowledged that their concerns are listened to: *“We are happy with the collaboration with MSF, they listen to us.”* FGD with men.

At hospital level, quarterly patient satisfaction surveys for inpatients in Kabo HC have recently been introduced, which is a very positive step.

### Community participation and ownership

The level of community ownership varies. While communities have been involved in the selection of the CHWs and TBAs, their contribution to sustaining the system has been limited to the construction of small health posts in some villages. MSF staff and CHWs reported difficulties in convincing communities to support their CHWs and TBAs, who provide a volunteer service to their community and have less time to work in their fields.

Some villages allocated land for CHWs which was closer to the village, so it was easier for them to combine their agricultural work with their tasks as CHWs. But in general, support for CHWs from their communities has remained poor. As one CHW put it, *“We don’t have any help from the community. We can’t work our fields or go hunting.”*

MSF staff explained that the lack ownership from the community was partly because CHWs are perceived as MSF employees<sup>34</sup> and communities don’t consider them as volunteers. This lack of ownership is an indicator that there is still room for improvement for community engagement and participation.

## 3.3 Effectiveness

### 3.3.1 Effective implementation and achievement of specific objectives

After initial challenges due to insecurity and the temporary suspension of MSF activities in the periphery in 2017, the new community strategy was effectively implemented with good results, and the strategy’s specific objectives have been achieved.

Main strengths include the initial CHW recruitment process; focus on practical training and regular refresher training for CHWs; MSF-paid motorbike referral system; the addition of one mobile health educator per road for health promotion and community surveillance; complementary preventive mobile clinics for vaccination and ANC with more regular supervision as of 2018/2019; and the introduction of CAGs. Main challenges include the low level of education of CHWs; insecurity in 2017/2018; and budget limitations. The latter two limited the impact and frequency of supervision activities. Insecurity also affected regular supply of community treatment points.

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<sup>33</sup> Social accountability is a key element of community participation (WHO, Alnap and others)

<sup>34</sup> CHW receive a monthly incentive of 15000 XAF (ca 22 €) from MSF.

## Implementation – progress and constraints – achievement of objectives

Globally, specific objectives<sup>35</sup> of the strategy have been achieved: 1) the implementation of community-based, CHW-led curative care network; 2) the continuation of decentralised preventive outreach activities; 3) continuous support of Moyen Sido health post; 4) strengthening of health promotion activities; 5) expansion of the referral system from the community to higher-level care for severe cases; 6) the decentralisation of ART for PLHIV through the creation of CAGs.

However, insecurity and the temporary suspension of MSF movements in the periphery led to some delays in the roll out of the programme and affected its efficacy. Other challenges were the low level of education of CHWs; referrals by foot for less severe cases; initial work overload for CHWs before the introduction of mobile health educators; the gap in functional and affordable PHC facilities after MSF’s withdrawal from Gbazara and Farazala HP; and HIV-related stigma and interpersonal difficulties for CAGs.

<b>Timeline of implementation of Kabo community strategy</b>	
March 2017	<ul style="list-style-type: none"> <li>Preparation and the first training rounds for CHWs from Gbazara and Farazala roads, and the start of implementation were accomplished timely and effectively in March 2017.</li> </ul>
Mid-April to mid-July 2017	<ul style="list-style-type: none"> <li>MSF suspended activities in the periphery after an armed robbery took place in their Kabo base and general insecurity on the roads.</li> <li>This has affected the direct supervision and drug supply of the recently opened community treatment points. Instead, whenever possible CHWs came to the base for monthly meetings/refresher trainings and to restock drug supply.</li> <li>The suspension also delayed the training of the CHWs/TBAs from other roads and the Mbarara camps. The motorbike referral system remained functional.</li> <li>“One shot”/preventive mobile clinics, however, continued throughout (whenever possible) and were sometimes combined with supervision of CHWs/TBAs.</li> </ul>
Mid 2017 onwards	<ul style="list-style-type: none"> <li>Security situation improved but remained too unstable to carry out supervision regularly.</li> </ul>
End 2017 onwards	<ul style="list-style-type: none"> <li>The first CAGs were launched and the numbers continued to increase to 19 CAGs in August 2019 (seven in the periphery and 12 in Kabo town).</li> </ul>
2018	<ul style="list-style-type: none"> <li>The security situation improved, and the programme consolidated.</li> <li>Supervision of CHWs intensified but was still not possible on the Behili road.</li> <li>Mobile health educators were added in July to strengthen health promotion, surveillance and defaulter tracing on the roads.</li> <li>A new MWH in Kabo HC was opened to increase access to institutional delivery for pregnant women from the periphery.</li> </ul>
2019	<ul style="list-style-type: none"> <li>The security situation remained relatively calm. The programme was further consolidated.</li> <li>As of May 2019, community-based postnatal visits for mothers and newborns, conducted by TBAs, were added on the Gbazara road with success and will be rolled out to the other roads.</li> <li>As of September 2019, the schedule for preventive mobile clinics has been strengthened to improve vaccination coverage more effectively.</li> </ul>

*For more details see also table with timeline in annex 6.5.*

<sup>35</sup> MSF OCBA. Stratégie communautaire. OCBA 2017

## **Strengths, weaknesses enabling and hindering factors during implementation of components**

### ***CHW - Recruitment process***

A lot of effort was made during the preparation phase, including a rigorous recruitment process based on clear selection criteria with community participation. *See section 3.2.3 for more details.* MSF testing of three candidates per position ensured a transparent process and a final selection based on capabilities. The same rigorous steps in the recruitment process were unfortunately not followed when new CHWs had to be recruited in August 2019. Instead, village leaders were asked to suggest just one candidate without MSF involvement in the selection process. In order to include TBAs in the teams, the recruitment criteria for literacy and basic knowledge of French was dropped for this group. The selection based on their expertise remained.

### ***CHW - Training and supervision***

The initial training took two to three weeks and combined theory and practice in Kabo HC. Ongoing refresher courses are held once or twice every two months. There was not enough documentation available on training content/methodology to assess the quality of the training. According to MSF staff, the methodology is based mostly on images, videos and practice. The practical training is a very strong point. In the last training of the new CHW/TBA pairs for the Behili road, the average success rate was 75% which is acceptable. However, a midwife from Kabo HC, who was involved in the practical training, had the impression that some of the TBAs who attended the training were not ready for the new tasks that were expected from them. The CHWs interviewed appreciated the training:

*“Before the training we felt very insecure, now we feel confident and our people are happy.”*  
(FGD with CHW)

All MSF interviewees highlighted the importance of supportive supervision given the low level of education and capacity of CHWs. Supportive supervision is therefore needed to provide on-the-job training and monitoring of quality-of-care, data collection and the consumption of supplies. Comprehensive supervision checklists are available and are apparently used by an experienced nurse supervisor. At the time of the evaluation, community treatment points in Moyen Sido, Gbazara and Farazala were supervised and supplied on a weekly basis. In the Mbarara camps, visits to treatment points inside the camps are not accepted by the community. Instead, CHWs come to the MSF base for bi-weekly refills of supplies and reviews of their registers. MSF accepted this compromise to enable access to community-based treatment for the nomadic population. Supervision along the Behili road has been a challenge since the beginning because of distance, extremely difficult road access throughout 2017 and 2018, and insecurity. In mid-2019, when security had improved, three additional distant community treatment points were added along the Behili road. Monthly supervision with overnight stays is planned for the future.

A big challenge for the effectiveness of supervision has been the limited staff availability. After a reduction of staff due to budget limitations, the nurse supervisor was forced to cover the supervision of CHWs/TBAs, Moyen Sido HP *and* the preventive mobile clinic activities. For this reason, supervision was often only carried out when it coincided with preventive decentralised interventions.

### **CHW skills before and after training – task shifting**

The low level of basic education of CHWs/TBAs remains a challenge in CAR and requires ongoing coaching and refresher training. This was one of the reasons why MSF decided not to include antibiotic treatment for ARI. Supervisors confirmed that CHW/TBA skills have improved over time, and staff from MSF-supported health facilities stated that most of the referrals made by CHWs are appropriate, but that capacities and understanding still varies. An example mentioned was the referral by foot of a patient with severe acute malnutrition, instead of referral by motorbike.

CHWs are able to conduct rapid diagnostic tests (RDT) for malaria, treat simple malaria and diarrhoea, manage fever, conduct MUAC screening and refer complicated cases. But when the cases are more complex, they do not always recognise when referral is necessary. The TBA's role is mainly to identify pregnant women in the community, promote ANC activities, institutional delivery, postnatal care (PNC) and the use of the MWH. They also identify and refer patients with danger signs and provide systematic treatment to pregnant women as per the ANC protocol in collaboration with CHWs. Recently, postnatal visits seven days after delivery have been added to the package on one road with the aim to provide umbilical cord care and detect complications in mothers and newborns.

### **CHW - Motivation**

Overall, CHWs are very motivated, well accepted and respected by their communities. However, the level of incentives is a risk which could affect their motivation. Incentives are considered insufficient by CHWs, given the expectations of their availability and the lack of support they receive from their community. Another complaint expressed by CHWs is long waiting times and perceived disrespectful treatment by MSF guards when they come to the MSF base for resupply of medications.

### **Referral system**

#### *Set-up*

A referral system from the community to higher-level care in HPs or Kabo HC was established with clear referral criteria. This includes transport by MSF-funded motorbike taxis for patients with complications. Patients without signs of severity, e.g. a woman with a normal pregnancy who is referred to ANC or for delivery in Kabo HC, will not be eligible for motorbike taxis and will have to walk or rent a bicycle. Public transport is not available. The few private motorbikes that willingly use the roads generally belong to former Seleka members, which deters people from using them and the fees are unaffordable.

Since there is no mobile network in the villages, MSF sends one motorbike taxi along the three main roads (Moyen Sido, Gbazara, Farazala) every day. The taxis stop at each community treatment point to ask if there are patients that need referrals. Nights and Sundays are not covered by this system and patients need to walk or hire a bicycle to access higher-level care. Should patients be lucky enough to find a private motorbike taxi, the cost will be reimbursed by MSF. For counter referrals, the same motorbikes are used. For the Mbarara camps, private motorbike taxis are used at a negotiated rate.

The project has also started to provide incentives to untrained TBAs in the villages who refer women for institutional delivery. However, no effort has been made so far in involving traditional healers in the referral pathway.

#### *Challenges*

Due to difficult road access and long distances from health facilities, it has been impossible to set up a motorbike taxi referral transport system along the Behili road. This is a big gap and unsolved challenge.

Another challenge was that motorbike taxis were forced to pay taxes at road checkpoints. But this problem has been successfully solved by negotiating free passage with former Seleka commanders in charge, and by adding the MSF logo to motorbike taxis.

Deterrent factors for referral by foot mentioned by community members are distance, lack of means of transport/cost for renting a bicycle, having to pay at checkpoints and insecurity at night.

### *Respect of referral criteria*

According to MSF key informants and health workers interviewed at MSF-supported facilities, after initial difficulties, global referral criteria are now well understood and respected by CHWs and health workers from Moyen Sido HP.

### **Surveillance and data collection**

Establishing reliable community-based data collection for mortality surveillance has been challenging. This task was initially exclusively assigned to the CHWs at the treatment points. But they did not have enough time to conduct this properly. As of July 2018, one mobile health educator per road for Moyen Sido, Gbazara and Farazala roads was therefore added to strengthen community-based surveillance. Data collected by health educators is now being triangulated with the information collected by CHWs and community leaders, which is good practice. Nevertheless, we cannot rule out that some deaths or births have not been recorded.

All routine data of community-based medical activities collected by CHWs, and preventive decentralised interventions, are recorded in dedicated excel databases. They are not yet embedded into the HMIS, which makes integrated data analysis challenging. However, the integration of DMC activities into the HMIS system is being prepared at OCBA's headquarters.

### **Health promotion and community engagement**

The health promotion and community engagement team is experienced, motivated and is well accepted at the community level. Mobile health educators work in good coordination with the preventive and curative team.

They cover all villages on the three main roads with weekly visits. Other health educators cover Kabo and Moyen Sido and MSF-supported health facilities. Health promotion messages are aligned with priorities identified by the medical programme.

Although we have no baseline study to compare findings from interviews, focus group discussions suggest that they have contributed to improved community knowledge of health promotion messages and changes in health-seeking behaviour. *See section 3.3.2 for more details.* Unfortunately, due to the mobile nature of the work (travelling and spending nights in villages) all health educators working along the roads are male, which limits the possibility of gender specific engagement with women.

*"The health educator gives us good advice. What did we learn?"*

- *How to take care of our children*
- *How malaria can attack us*
- *How to have fewer children*
- *Cleaning well the crockery to avoids illness*
- *Washing hands after using the toilet.*

*He meets the chief, he goes to the houses to see how we are doing, he is very nice."*

Focus group with women in community

At present, mobile health educators work with limited methods and incomplete toolkits (i.e. limited number and limited type/topics of image boxes). No permanent advisory support from a flying health promotion expert is available at country level. Health educators must rely on visits from intermittent mobile implementation officers. The MSF OCBA DMC advisor, the humanitarian anthropology/community engagement/health promotion advisor and the MSF OCBA learning unit, are working on new training materials, tools and a guideline for the development of a community engagement strategy.

### **"One shot"/preventive decentralised interventions**

During 2017/2018, when the situation was more unstable, "one-shot", decentralised interventions were implemented during periods of relative calm. Improved security by of end 2018 and throughout 2019, has allowed for more regular activity. The ambition now is to engage with all communities in a more systematic way, in order to achieve good vaccination coverage. This is very



important given the low vaccination coverage in the region, and the proven effectiveness of these decentralised activities in the project area.<sup>36</sup> In order to achieve this without a negative impact on the number of supervision visits at CHW-run community treatment points, the project decided to temporarily assign a nurse from Kabo HC to lead the decentralised intervention teams, and asked for an additional member of staff in the annual plan for 2020.

### **Supply of community treatment points**

Supply of medicines and rapid tests for malaria is based on consumption. At the time of the evaluation, community treatment points on the three roads with regular access by MSF staff, were supplied weekly. Community treatment points in the Mbarara camps and along the Behili road were supplied bi-weekly from the MSF base.

During MSF's temporary suspension of MSF staff in the periphery in 2017 and 2018, all CHWs had to come to the MSF base for resupply. This led to temporary stockouts when CHWs were unable to move or when they were robbed during the journey, though no precise reports were available to evaluate the scope of the negative impact. No contingency plan for this scenario (e.g. a security stock at village level/runaway backpack) is currently in place. MSF staff argued that the risk of theft/assault by armed actors would be too high.

Problems of "overconsumption"/suspicion of theft in communities along the Behili road had also been reported in August 2018. In response, MSF temporarily suspended activities in these communities, but restarted services in November 2018 with new CHWs.

Some temporary stockouts of malaria rapid tests and drugs were reported along the Moyon Sido and Farazala roads. The latter seems to be related to higher utilisation of treatment points by the population from Farazala village, where the COGES-managed HP has no medication in stock.

*"I took my child to Belalo (closest community treatment point from Farazala). The malaria test was positive, but their medication had run out. I gave him traditional treatment, but he is still sick."* (FGD with COGES and health workers of Farazala HP)

Another reported reason for stock outs was the robbery that took place in two treatment points along the Behili road, by armed actors who wanted treatment despite not belonging to the target group. A record with the number of this type of incidents was not made available for the evaluation.

### **Relationship with higher levels of care**

Community treatment points are well connected to Moyon Sido HP and Kabo HC when it comes to referrals of complicated cases. The preventive decentralised interventions complement the community-based vaccination and ANC activities. However, there is currently no appropriate referral relationship with the other PHC facilities, Gbazara and Farazala HPs, since both have not been fully functional after MSF's withdrawal. *See also section 3.2.1.*

Gbazara HP suffers irregular drug supply, and the cost recovery system in Farazala HP is a financial barrier for the population. Instead of referring patients to the closest PHC facilities, community treatment points close to Gbazara and Farazala refer patients directly to Kabo HC. Patients from Gbazara and Farazala villages prefer to seek care either in MSF-supported community treatment points nearby (instead of using their PHC facility), go directly to Kabo HC, self-medicate with drugs bought in the market, or go the ICRC-supported Ouandago HC in the neighbouring district, Kaga Bandoro. This is a significant shortcoming in the system caused by the dysfunctionality of the two PHC facilities after MSF disengagement.

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<sup>36</sup> MSF OCBA. Vaccine Coverage Survey Batangafo and Kabo (Ouham, Central African Republic). January 2017

## CAG – implementation and set-up

CAGs have been implemented successfully and are particularly appreciated by patients who live in the periphery. MSF started to create CAGs at the end of 2017. PLHIV on ART were gathered for information sessions in groups of patients who live close to each other, and the concept of CAGs was explained. Stable patients on ART with a viral load <1,000 copies and, exceptionally, even stable patients with a viral load >1,000 copies, could be included. Those who volunteered to join a CAG selected a focal person who could read and write. This person is in charge of filling out the group report on adherence and recording potential health problems, before he or she travels to Kabo HC to collect the ARV refill for the whole group every two months. For CAGs in the periphery, transport is organised by an MSF-funded motorbike taxi – an adaptation of the original model<sup>37</sup> given the fact that there is no public transport available in the periphery. Groups meet at least twice a month for adherence support, monitoring of side effects or any signs that would require medical consultation, and for ARV distribution. Individual patients without symptoms come for medical check-ups every six months and viral load control once a year.

### 3.3.2 Changes in health-seeking behaviour

Community members, CHWs and MSF staff described important changes in health-seeking behaviour and perception of illness and therapy of choice, due to the implementation of the community strategy. But due to the absence of a baseline health-seeking behaviour study, the validity of the HSB information is limited. It only represents the perception of MSF staff interviewed and of focus group discussions with communities and CHWs. It is also difficult to know whether the reported changes are exclusively effects from the implementation of the 2017 community strategy, or if they are related to other activities implemented by MSF in previous years.

#### Changes in access to healthcare

A consistent finding from focus group discussions and interviews with community members and patients from the periphery at Kabo HC, was that the implementation of the community strategy seems to have facilitated access to biomedical healthcare. Before the availability of community treatment points, access had been limited by long distances and lack of means of transport; security barriers and check points; and economic barriers. People often had to rely on self-medication or on traditional healers and TBAs. For medical treatment, they had to make the journey to distant HPs or to Kabo HC. Due to the constraints mentioned above, this was usually the last option.

With the presence of CHWs and trained TBAs, free, basic curative and preventive packages became available in villages and camps populated by the nomadic Mbarara people.

The possibility of free referrals by MSF-funded motorbike facilitates now access to hospital for more serious cases and deliveries. This is particularly relevant in an area where there is no other means of transport.

#### Changes in access to healthcare

*“Women didn’t go to hospital and delivered at home with TBA. Many died.”*

FGD with men in community

*“Before we didn’t have the CHW and when we were sick, we had to go to the forest and find roots to cure ourselves.”*

*“Before we had to get roots from the trees, now we have MSF drugs. We suffered a lot. Thanks to MSF we have the drugs in the village in our little health post.”*

FGDs with women in community

<sup>37</sup> In the original model developed by MSF in Mozambique patients shared transport costs for the person who collects the ARVs.

The outreach activities have facilitated access to vaccinations and ANC. The messages promoted by the health educators who visit villages along the three main roads, have contributed to changes in health-seeking behaviour. However, this is not the case in the Mbarara camps, as MSF has no direct access there.<sup>38</sup>

Even if the population perceives that access to health has improved, limitations remain due to limited referrals and availability of drugs in the villages. *See also section 3.3.1.*

### **Changes in perception of illness and therapy of choice**

Main changes as a consequence of the community strategy are:

#### *Malaria*

Previously, the origin of malaria was often not known and in case of febrile seizures in children, witchcraft was often suspected.<sup>39</sup>

*“Before the children had seizures, now we know the signs. We thought it was witchcraft.”*  
(FGD with women in community)

For treatment of this condition, people used home remedies (plant roots) or traditional healing or self-medication with un-prescribed drugs. Today, CHWs can test for malaria and provide early treatment and refer severe cases. People are now also aware of the importance of mosquito nets for prevention, although very few are available.

#### *Measles*

Traditionally, rashes were treated by covering the child with sand or cassava leaves and applying a concoction made of roots. Nowadays, people understand measles symptoms and know that it is a disease that can be prevented by vaccination. Accepting vaccination as a preventive measure is another significant change.

#### *Fever*

Basic fever management with damp cold cloths has been cited as a new home remedy recommended by CHWs, as was referral by CHWs for children who do not respond to paracetamol.

#### *Deliveries and ANC*

In the past, women tended to deliver at home with the help of a TBA, if there were problems. In some communities, women were expected to deliver alone in a field and gained respect if they succeeded.<sup>40</sup> Apparently, few women delivered in health facilities and maternal deaths during delivery were frequent.

Several factors have had a positive effect including the presence of the trained TBAs, motorbike taxi referrals, weekly visits from health promoters, the engagement with TBAs<sup>41</sup>, the MWH, mobile clinics with ANC services and community leaders' involvement. Interviewees from the community reported an important shift towards more hospital deliveries, although this has not had much impact on the total number of deliveries in MSF-supported facilities. ANC is encouraged: trained TBAs follow up pregnancies and refer women for ANC services and to the MWH in Kabo. Referrals by foot remain the main constraint.

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<sup>38</sup>Negotiations are going on with Mbarara leaders to ensure access for MSF to the camps. Outreach activities of MSF take place outside the camps and the CHWs come to MSF base for supply.

<sup>39</sup> Witchcraft is a serious problem in CAR. Vulnerable groups, particularly women accused of witchcraft are killed.

<sup>40</sup>In the case of the nomadic Mbarara, women were left alone with a cow in the fields. They are expected to deliver alone, with no help.

<sup>41</sup> Untrained village TBAs get a present if they refer a pregnant woman for delivery.

*“Women suffered a lot during deliveries, sometimes it lasted three days. Now with the TBAs, if they see there is a problem, they refer them to the hospital. Now the TBA is trained.”*  
(Interview with a community leader)

### **Other therapeutic choices: traditional healers, self-medication, home remedies**

Although there has been a significant change in health-seeking behaviour, other therapeutic choices still play a role including traditional healers, untrained TBAs, drug shops, drug peddlers and home remedies. According to the 2019 round 2 MSF patient satisfaction survey carried out in Kabo hospital, among 29 participants from outside Kabo town; 14 had first sought care either at a health post or another hospital, seven had gone to a traditional healer, five to a drug shop and three went to another place.<sup>42</sup>

Contrary to the collaboration with TBAs, the project has no strategy for how to engage with traditional healers, despite the important role they play. For many, traditional healers are still the first choice for care and there is a lot of social pressure to go to them. So far, MSF’s approach has been to warn the population of the potential negative impacts of traditional treatment, since some of the deaths recorded in health facilities are due to delays in seeking treatment, or because of the toxicity of traditional medicine.

The perception is that people use traditional healers less than before, at least for malaria treatment, but response bias is likely in this case as the following community quotes suggest, *“We learned that if we take traditional medicine and MSF medicine together, we could die. They told us this at the hospital”*; *“In this village we don’t have a traditional healer anymore,”*; *“traditional healers are banned in this village”*.

When giving feedback on these findings to MSF project staff, it was acknowledged that the lack of engagement with traditional healers was a weak point that should be addressed.

Self-medicating with drugs bought at market stalls or from peddlers remains a popular choice. People seem to prefer products with attractive packaging and injections, often considered more effective than pills dispensed by MSF. Avoiding long waiting times at the hospital was mentioned as one of reasons for this choice. *See also the 2018 Kabo case study report on the use of antibiotics and its drivers in MSF OCBA projects.*<sup>43</sup>

Finally, home remedies are still mentioned as an initial choice, although the availability of drugs with CHWs seems to have limited this option: *“The roots (home remedies) do not compare to MSF drugs”*.

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<sup>42</sup> MSF patient satisfaction survey, CAR, Kabo Round 2, 2019

<sup>43</sup> More information of self-medication can be found in the evaluation in MSF evaluation report: *The Use of Antibiotics and its Drivers in MSF OCBA Projects: Case Study Report Kabo, CAR.*

### 3.3.3 Community perception of DMC-related services

Communities highly appreciate the improved access to healthcare gained through community treatment points, and the free motorbike referral system for severe cases. They are satisfied with the quality-of-care provided by CHWs/TBAs and staff in referral health facilities. Main perceived areas for improvement include exclusion of adults, temporary stock outs of medicines, limited number of motorbike taxis, lack of mosquito nets and lack of MSF support for Farazala HP.

This section covers community perception of CHW/TBA-related activities, health promotion, mobile clinics and the referral system. *For the perception of CAGs, see section 3.3.4; for more details on the maternity waiting home see section 3.3.8.*

#### Positive perception

##### *Improved access to free healthcare*

Through community treatment points, free, basic, curative and preventive packages of care are now available in villages and Mbarara camps across the region. This service, the free motorbike referral system and MWH are highly appreciated by the community.

##### *Satisfaction with quality of care and health worker attitude*

The population is satisfied with the quality-of-care provided by CHWs /TBAs, the advice provided by health educators and the decentralised mobile clinics bringing vaccinations and ANC to the community. The perception is that these services have a positive impact on the health of the population.

People are also satisfied with the quality-of-care they receive at MSF-supported referral facilities, the care and free food provided at the MWH, and the attitude of their health workers. This matches the results of the 2019 Kabo HC satisfaction survey,<sup>44</sup> where 27 out of 35 patients/caretakers from the periphery were either happy or very happy with staff.

##### *Feeling safer*

During focus group discussions with male community leaders the perception of improved safety was mentioned including: 1) reduction of vulnerability – by having medicines in the village, women are no longer forced to collect plants from the fields for home remedies, where there is a risk of violent conflict with pastoralists;<sup>45</sup> 2) availability of healthcare in the village is considered as a factor preventing displacement.

#### Perceived gaps and areas for improvement

Few gaps and areas for improvement were also mentioned:

- Limitation of the target group and exclusion of adults
- Temporary stock outs of some medicines in the community treatment points
- Limited number and operating hours of motorbike taxis; absence of motorbike-taxi referrals along the Behili road
- Lack of support for Farazala HP

#### Community perception of DMC

*“The CHW can identify malaria very fast. With the CHWs we can see a lot of improvement in the villagers’ health.”*

*“It would be good if adults could be treated too.”*

*“It would be good if we could have mosquito nets.”*

*“If it was not for MSF, we would not be here. They are providing free healthcare. We thank MSF for staying here. Despite the conflict, they stayed with us.”*

FGDs with community members

<sup>44</sup> MSF Patient Satisfaction Survey, CAR, Kabo Round 2, 2019

<sup>45</sup> The traditional conflict between pastoralist and agriculturist has worsened with the ex Seleka rule.

- Lack of mosquito nets for preventive use (only available for hospital deliveries)
- Lack of cover for CHWs in case of illness
- Long waiting times in hospital (mentioned by people who had been referred)
- Limited coverage of Mbarara camps

#### Future without MSF support

Fear that MSF would leave before the conflict is over was also expressed: *“The conflict, is not over, we don’t have peace. MSF should stay until peace comes. (...) We are worried MSF will leave, there is a rumour MSF will leave in 2020.”*

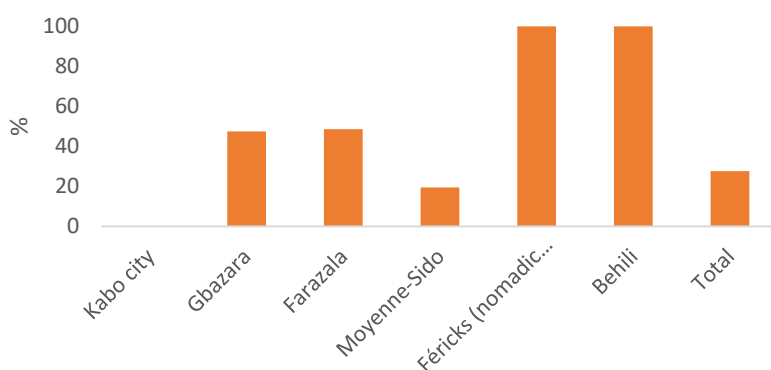
But it was also acknowledged that even if MSF does withdraw support, they will leave behind local people who are now much better trained.

### 3.3.4 Effects of community strategy on access to healthcare

The community strategy has had a positive effect on access to healthcare. Availability of health services increased substantially with the implementation of the community case management programme in the periphery, but availability of functional PHC facilities decreased with the MSF’s withdrawal from two HPs. A high number of patients were treated or referred. Decentralised interventions complemented treatment points with vaccination and ANC. Continuum of care is effectively assured for severe cases by motorbike referral but is insufficient for referrals by foot. CAGs have improved access to ART and reduced interruptions to treatment with good effect on viral load results.

#### Health services coverage

Based on population figures from September 2018, 27.6% of the population in the MSF Kabo project area lives outside the direct catchment of a health facility (>5 km). Along Behili road and in the Mbarara camps, this applies for 100% of the population, who are only covered by community treatment points. See figure 1 below.



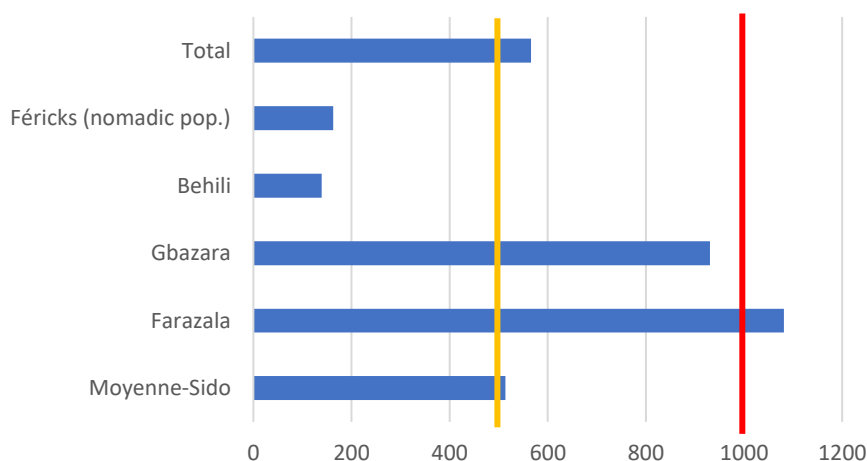
**Figure 1: Proportion of the population living outside the direct catchment of a health facility (>5 km) by road, MSF Kabo project area, 2019**

Looking at the coverage of CHWs<sup>46</sup>, the average ratio in the programme is in line with the minimum standard of one CHW/home visitor per 500 to 1,000 inhabitants, as recommended by MSF in

<sup>46</sup> Ratios were calculated using the population figures of CHW catchment areas and excluding those of health facility catchment areas.

refugee situations. <sup>47</sup> In Farazala, it is above 1,000 (red line). However, the recommended ratio of CHWs to inhabitants (applicable for home visitors involved in health promotion and preventive activities) is currently under revision by the MSF OCBA DMC referent.

Ratios will need to be differentiated depending on the complexity of the activities carried out by CHWs. Though not decided yet, ratios will be lower for curative CHWs who carry out diagnosis, treatment and referrals. If we set the lower end of the standard of one CHW per 500 inhabitants (yellow line), the average ratio of CHWs per inhabitants would be insufficient and fall far below the standard in the locations along Gbaraza and Farazala roads. *See figure 2 below.*



Red and yellow line represents the number of inhabitants/CHW (min-max. standard in refugee camp)

**Figure 2: Number of inhabitants per CHW in the population living outside the direct catchment of a health facility (> 5 km) by roads, MSF Kabo project, 2019**

#### Availability of health services including community treatment points

Availability of health services in the project has substantially increased with the creation of 31 community treatment points along the main roads, and in camps populated by the nomadic Mbarara community. *See table 2 below.*

	Kabo town	Moyen Sido	Farazala	Gbazara	Behili	Mbarara camps	Total
Secondary healthcare	1						1
Primary healthcare	1	1	1*	1*			3
Community treatment points		5	6	6	7**	7	31
Preventive mobile clinics		yes	yes	yes	yes***	no	

\* Limited functionality since MSF disengagement \*\*Increased from 4 to 7 in September 2019 \*\*\* only possible since July 2019

**Table 2: Availability of health services – community treatment points, MSF Kabo project, October 2019**

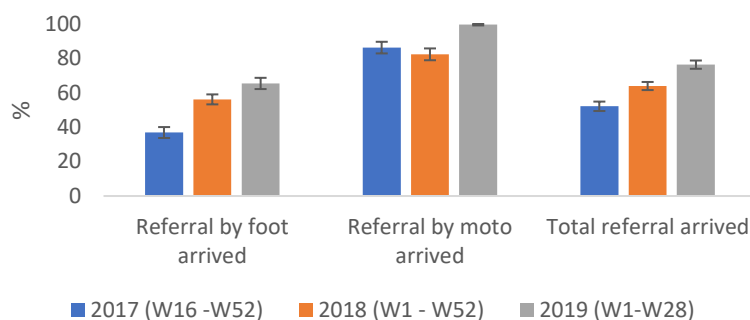
Effective access to functional PHC facilities was reduced due to the poor functionality of Farazala and Gbazara HPs after the disengagement of MSF. *See section 3.2.1 and 3.3.1 for more details.* Due to insecurity and very difficult road access, the number of community treatment points on the Behili road only recently increased from four to seven. Long distances and lack of means for transport continue to hinder access to higher-level care. *See also section 3.3.1.*

<sup>47</sup> MSF. Refugee Health. An approach to emergency situations. 1997.

Along the three main roads, treatment points or health facilities are accessible no more than 5 km distance away. In Mbarara camps, CHWs move with the population. Decentralised interventions with a preventive healthcare package for vaccination and ANC complement the community-based activities in a less regular manner.

### Referral to higher-level care

The proportion of referrals to the health facility by motorbike increased from 82% in 2018 to 99.7% in 2019. The proportion of referrals by foot increased every year from 37% in 2017 to 56% in 2018 and 66% in 2019. The total proportion of referrals that arrived in the health facility also increased every year, rising to 80% in 2019. See figure 3 below and table 6 in annex 6.7.



**Figure 3: Proportion of referrals that arrived by type of referral and year, MSF Kabo project, 2017-2019**

It is obvious that motorbike referrals are more effective than referral by foot. However, motorbike referrals are limited to severe cases, are not available on Sundays or at night, and not available at all along the Behili road. Around 33% of cases referred by foot still do not reach the health facility due to distance, lack of means for transport, financial barriers (cost for transport by bicycle, taxes at checkpoints) or fear of insecurity. Walking distances of three to four hours were reported by patients that travelled from their village to Kabo HC on foot. See also section 3.3.2.

The proportion of referrals by foot (that actually arrive at a health facility) are nevertheless increasing, which could indicate that health-seeking behaviour is changing as an effect of health promotion activities and community satisfaction with the quality-of-care provided at health facilities. Improved security might have been another enabling factor. No targets for referrals had been set in the strategy.

### Utilisation of community-based services

Since the implementation of the community case management programme in 2017, and up until week 28 in 2019, a total 70,486 patients visited community treatment points (according to the project's community activity database). Malaria was the most frequent diagnosis; of these patients, a total 57,143 were treated for uncomplicated malaria, 473 were diagnosed with severe malaria, and 2,115 for respiratory tract infections. A total 4,242 sought care for diarrhoea.

In addition, 7,500 pregnant or lactating women received either preventive treatment or were treated for malaria by CHWs/TBAs. These numbers seem disproportionately high given the population figures. Reasons could be errors in data collection; adult patients treated and recorded as <5-years in order to stay within MSF's target group; patient numbers in records were inflated and tests and drug supplies were deviated; or incorrect population figures. See tables 7, 8 and 9 in annex 6.7.

Additionally, decentralised preventive activities/"one shot" activities for vaccination and ANC were carried out: 45 in 2017; 42 in 2018; and another 35 until week 40 in 2019. In 2018, 613 ANC consultations were conducted, and in 2019 (up until September) 347 women benefited from community-based ANC. In 2018, 5,829 children or pregnant women were vaccinated and 4,347 in



2019 (up until September). *See table 3 below.* Routine data was incomplete so the vaccination coverage achieved could not be calculated.<sup>48</sup>

	2017	2018	Week 40, 2019
Number of mobile clinics/one shots	45	42	35
Number of ANC		613	347
Number children vaccinated		5,829	4,347

**Table 3: Number of preventive decentralised interventions/“one shot” 2017 – week 40 2019, MSF Kabo project**

### Effects of Community ARV Groups

By the end of September 2019, 126 patients (51% of the total active ART cohort) have been enrolled in a total 21 CAGs – nine in the periphery and 12 in Kabo town. *See table 16 in annex 6.7.* CAGs have had a good effect on patients’ continuous access to ARV, their adherence to treatment and their viral load results.

At the end of September 2019, the average viral load suppression among the 126 active CAG members was 95.2%<sup>49</sup> which is a very good result. Comparative viral load results of patients in individual follow-up were not made available for analysis. *See table 4 below.*

	Numbers	Percent
Patients in CAG	126	
Viral load <1000 copies at last control	120	95.2
Viral load >1000 copies at last control	6	4.8

**Table 4: Viral load suppression among CAG members, Kabo project, October 2019**

The CAG members interviewed in the evaluation, expressed appreciation that don’t have to travel to the HC regularly and that patient waiting times are thus reduced. Most patients have not disclosed their HIV status due to fear of stigmatisation and are happy that they don’t have to give a reason for frequent HC visits anymore. Those living in the periphery feel very relieved that ARVs are now received via one group member, that they don’t need to travel long distances every month anymore, and they don’t fear being harassed or having to pay taxes at the checkpoints.

The positive impact of peer support on adherence and in coping with their HIV status was also highlighted by CAG members as well as direct, mutual adherence support. Some CAGs started other initiatives including the creation of a solidarity fund for their members.

Fear of stigma remains a challenge, especially in Kabo town.

#### Patient perception of CAGs

*“Before, we had long waiting times. Now it is faster.”*

*“Before, we had to go to the hospital every month. Now the community is less suspicious.”*

*“Before, we were mugged on the road and taxed at the checkpoints. Now they fetch us with the motorbike. The motorbike taxi has an MSF logo.”*

*“Before, I felt very alone with this problem (being HIV+). With the CAG we learned that there are others with the same problem. So this made me feel better in my heart.”*

Focus group with CAG members

<sup>48</sup> A vaccination survey done in 2017 in Kabo and Batangafo project area revealed very low coverage rates for antigens.

<sup>49</sup> Etchia. F. *Les Groupes Communautaires d’ARV*. MSF Report about CAG implementation in CAR. October 2019. For some patients viral load results of September 2019 2019 were not yet available. The results of 2018 were taken to calculate the global viral load suppression among the CAG cohort.

Some people prefer not to join CAGs for this reason. Others meet secretly, change their meeting places or meet only very briefly to refill their ARVs.

Other challenges observed by health workers have been interpersonal problems. Some patients have therefore left CAGs, particularly in town.

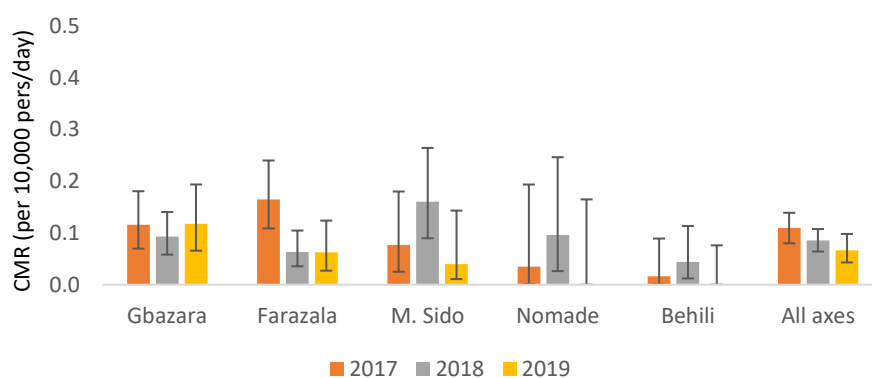
Overall, MSF health workers concluded that CAGs have been successful. Through pill counts they observed that adherence is better than among individual patients, and most of the CAG members don't have interruptions in treatment anymore, even if it is difficult to make some of them come regularly to the HC for their viral load monitoring.

### 3.3.5 Trends in community mortality

Community crude mortality rates and under five mortality rates in the periphery remained under the emergency threshold throughout and decreased slightly in all areas targeted by the community strategy, which could be an effect of the increased access to care. However, these figures are prone to underreporting and information bias. Underreporting is very likely along the Behili road and in nomadic camps. We also cannot exclude that the slight decrease was due to an improvement of the security situation overall and, therefore general better access to healthcare.

#### Crude mortality rates

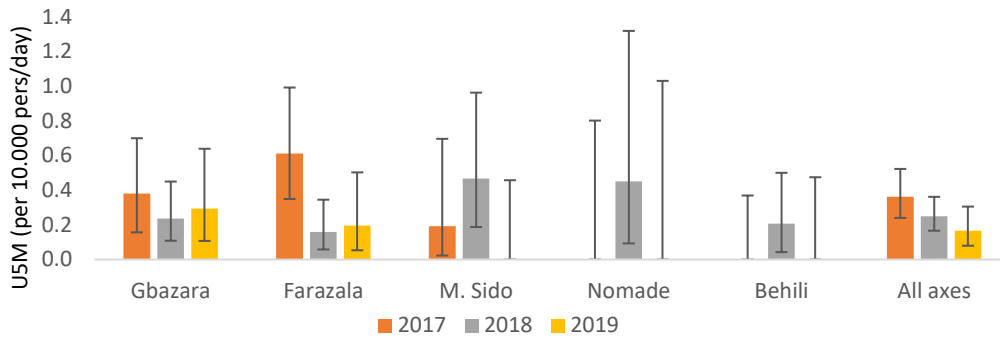
Overall, CMR remained under the emergency threshold for adults (>1/10,000/day). There is a slight decrease of CMR from 0.11 to 0.07 in all the areas targeted by the strategy, but it is not statistically significant (low numbers). Along the Farazala road, we observed a statistically significant decrease from 2017 to 2018. See figure 4 below and table 14 in annex 6.7.



**Figure 4: Crude mortality rate (deaths per 10,000 /day) by axe and year, periphery MSF Kabo project, 2017-2019**

#### Under 5 mortality rates

For U5MR, we observed the same trend as for CMR. Overall, U5MR stayed under the emergency threshold for children aged <5-years (2/10,000/day). There was a slight decrease in U5MR in all the four target areas of the community strategy; from 0.36 in 2017 to 0.17 in 2019. But this was not statistically significant (low numbers). A statistically significant decrease was observed along the Farazala road from 2017 to 2018. See figure 5 below and table 15 in annex 6.7.



**Figure 5: Under 5 mortality rate (deaths per 10,000/day) by road and year, periphery MSF Kabo project, 2017-2019**

Community-based mortality rates are major indicators to assess the impact of the community strategy. Our data shows a trend towards an improvement along all four main roads and along Farazala road between 2017 and 2018, particularly for CMR and U5MR. But this type of data can be challenging to collect and is prone to underreporting and information bias. E.g. there is a high probability of underreporting along the Behili road, where until very recently supervision by MSF staff onsite was impossible, and where no mobile health educators could be placed to support data collection. The latter was also the case for the Mbarara camps, which do not allow outsiders to enter the communities. Moreover, this data was not collected before the intervention began, so no baseline information was available for comparison. Therefore, we recommend strengthening this type of data collection for a better impact evaluation. We also cannot exclude the possibility that the slight decrease was due to an improved security situation and therefore better access to healthcare.

The MSF OCBA 2016 nutrition and mortality survey, and the 2017 vaccination coverage and under five mortality surveys, could not be used for comparison since the study areas differed from the DMC target area (Kabo periphery), or rates could not be differentiated for different geographic areas.<sup>50</sup>

*“Before, many people died of malaria. Now it is treated on the spot.”*  
Focus group women in community

Interviewees from communities also shared the impression that mortality in their villages has reduced since the availability of community treatment points, and the motorbike referral system for severe cases.

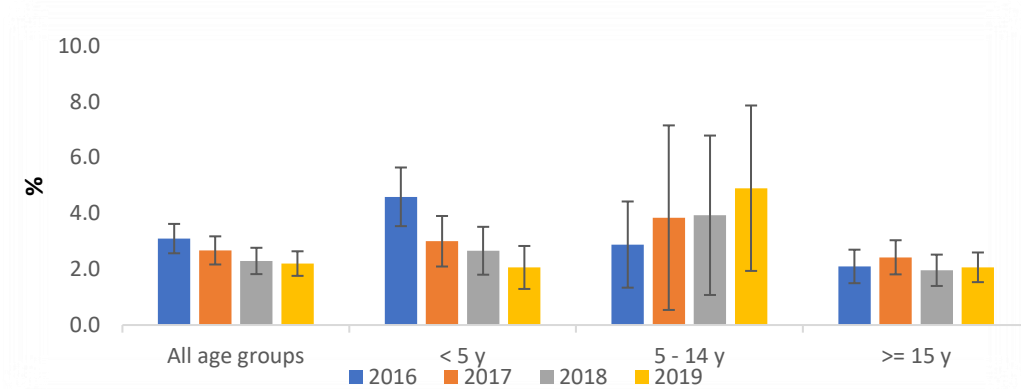
### 3.3.6 Trends in hospital mortality

Compared to 2016, there has been a significant decrease in hospital mortality among children aged <5-years, and a slight decrease of overall hospital mortality. Early hospital mortality decreased slightly among children aged <5-years, which could be interpreted as a positive effect of the new community strategy (although other factors including improved security could have helped people to seek healthcare more rapidly at facility level). Overall early hospital mortality rates did not change.

<sup>50</sup> The 2016 nutrition and mortality survey only included Kabo town; the 2017 vaccination coverage survey that covered urban and rural areas of both, Kabo and Batangafo projects showed an U5MR of 1.05 deaths/10.000/day (95%CI: 0.81 – 1.35; deff 0.99) for a recall period from May 2016 to February 2017. But due to low numbers, it was impossible to estimate the U5MR per different areas.

## Hospital mortality

The most important finding is the statistically significant decrease of hospital mortality among children aged <5-years compared to 2016. Overall hospital mortality among all age groups also decreased slightly, but this was not statistically significant. Hospital mortality among children aged between 5 and 14-years and adults remained statistically constant across all four years. See figure 6 below and table 10 in annex 6.7.



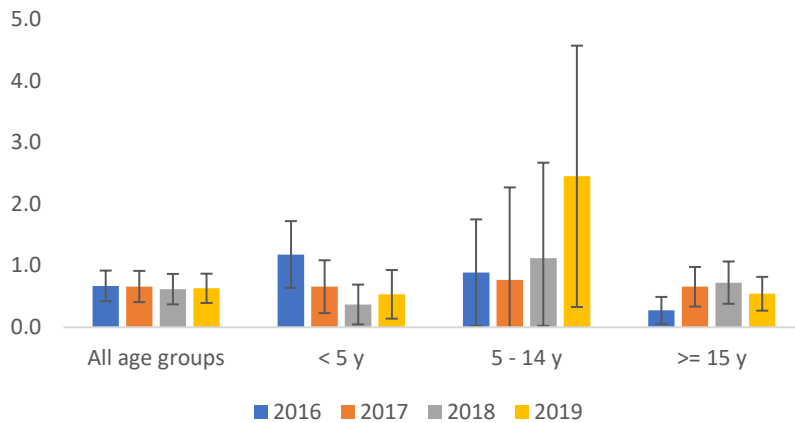
**Figure 6: Hospital mortality (%) among inpatient exits by age group and year, MSF Kobo project, January-September 2016-2019**

The decrease in hospital mortality among the <5-years could be interpreted as a positive impact of the community case management strategy. The reasons why we see this significant change only in this age group could be explained by the project's selection of target groups over time, which reinforces the argument that the new community case management strategy played a role. In 2017, target groups were <15-years, pregnant and lactating women, and adults during the malaria peak. From 2018 to June 2019, the target group was reduced to <5-years and pregnant and lactating women. From July 2019 on, the target group was increased for <15-years and pregnant and lactating women for the malaria peak. Thus, children aged <5-years remained the constant core target group, as did pregnant and lactating women. The latter, however, represent only a relatively small proportion of the total population.

### Early hospital mortality (<48 hours)

Early hospital mortality during the first 48 hours after admission is used as a proxy indicator to assess the percentage of patients who arrived in an already seriously deteriorated state, when there was little or no chance to save their lives.

Compared to 2016, early hospital mortality of children aged <5-years decreased slightly, but the difference is not statistically significant because of low admission numbers. No changes have been observed for early hospital mortality for all age groups together. See figure 7 below and table 10 in annex 6.7. Analysis of this indicator for malaria alone was not possible with the available data.



**Figure 7: Early (<48h) hospital mortality (%) among inpatient exits by age group, MSF Kabo project, January - September 2016-2019**

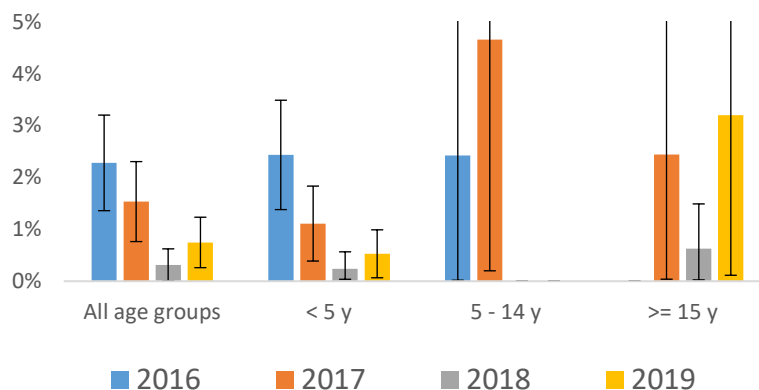
The slight decrease in early hospital mortality among the <5-years, is similar to the trend observed in the overall hospital mortality. However, due to low numbers of early hospital deaths among children <5-years, we cannot conclude with statistical certainty that the programme has had a positive impact on the reduction of early hospital mortality among this age group. A consistent perception among health workers from Kabo is that the number of severe cases has reduced, with patients being referred earlier and arriving at the health facility in a less severe state.

### 3.3.7 Trends in disease severity

Compared to 2016, malaria case fatality rate (CFR) decreased significantly among all age groups in 2018 and among children <5-years in 2018 and 2019. Likewise compared to 2016, the proportion of severe acute non-bloody diarrhoea cases, as well as severe bloody diarrhoea, has significantly decreased. For both, community case management, early referral and improved health-seeking behaviour in the modern sector may have played a role.

#### Malaria case fatality rate

Compared to 2016, inpatient CFR of severe malaria among children <5-years decreased with statistical significance in 2018 and 2019. It also decreased with statistical significance for all age groups in 2018. No change was observed among children aged between 5 and 14-years or among adults (few numbers of severe cases). See figure 8 below and table 11 in annex 6.7.

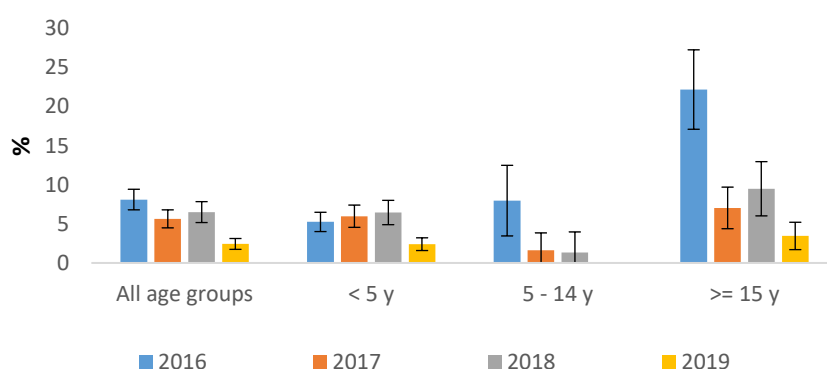


**Figure 8: Case Fatality Rate (%) among hospitalised severe malaria cases by age groups and years, MSF Kabo project, Jan-Sept 2016-2019**

As for the reduction in the overall hospital mortality rate, the reduction of the CFR of severe malaria among children <5-years could be partly associated with the community case management programme and effective referral system for severe malaria cases. Other factors for this reduction include improved security increasing access to health facilities. This finding also substantiates the health workers observation that severe cases arrive sooner and in a less deteriorated state. See section on hospital mortality above.

### Severe acute non-bloody diarrhoea

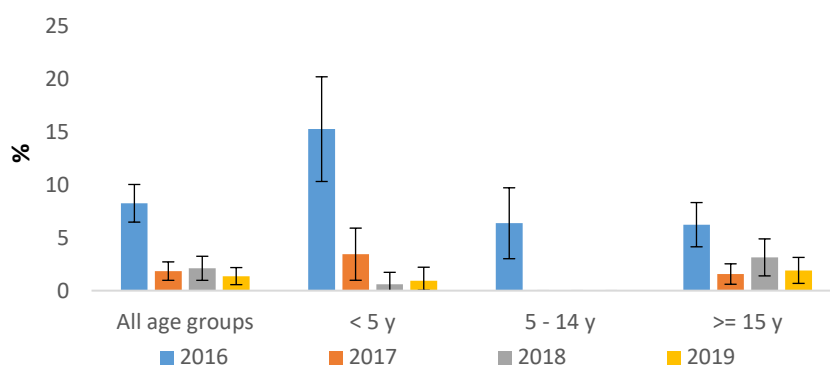
Compared to 2016, the proportion of severe acute non-bloody diarrhoea cases among all acute non-bloody diarrhoea cases shows a statistically significant decrease for all age groups and for children <5-years in 2019. For the age groups of 5-14 years and adults, there is a statistically significant decrease after 2016. See figure 9 below and table 12 in annex 6.7.



**Figure 9: Proportion of severe diarrhoea among all non-bloody diarrhoea cases by age groups, Kabo sub-prefecture, January - September period, 2016-2019**

### Severe bloody diarrhoea

Our results show a statistically significant decrease in the proportion of cases of severe bloody diarrhoea among all bloody diarrhoea and in each age group separately after 2016. See figure 10 below and table 13 in annex 6.7.



**Figure 10: Proportion of severe diarrhoea among all bloody diarrhoea cases by age group and year, Kabo sub-prefecture, January - September period, 2016-2019**

For both the proportion of severe cases of non-bloody and bloody diarrhoea the community case management, early referral, health promotion and improved health-seeking behaviour may have played a role alongside other potential factors.

### 3.3.8 Trends in the number of patients in health facilities

The number of OPD consultations increased slightly for all age groups. IPD admissions increased slightly for adults, remained relatively constant for <5-years and decreased in 2017 for <15-years.

The MWH was increasingly used after referral advice given primarily by TBAs. The number of institutional deliveries increased slightly in 2019.

#### Outpatient consultations

The number of OPD consultations in Kabo HC and Moyen Sido HP increased from 69,937 in 2016, to 87,037 in the period between January 2019 and September 2019 (for all age groups). See table 10 in annex 6.7. Thus, the availability of community treatment points did not reduce the overall number of OPD consultations as some may have expected, rather they seem to have served as additional entry points to care. Factors that may have contributed to the increase in OPD consultations in the two MSF-supported facilities could include improved security on the roads, stronger health promotion activities and the disengagement of MSF from Gbazara and Farazala HP, among other unknown factors.

#### Inpatient admissions

The number of IPD admissions in the two MSF-supported health facilities increased among adults, remained relatively constant among children <5-years, but decreased among children aged between 5 and 14-years in 2017. No clear association between the trend in IPD admissions and the community programme can be concluded. See table 10 in annex 6.7.

#### Maternity

##### Maternity waiting home (MWH)

MSF promotes institutional delivery for all women. To ensure women from the periphery are able to deliver in a health facility, MSF has constructed a new MWH in Kabo HC. Women with normal pregnancies who live far away are encouraged to move to the MWH two weeks before their expected delivery date. Women with a history of complications in previous deliveries, or with signs of risk during pregnancy, are sometimes referred even earlier than two weeks before the delivery date. A total of 234 women were admitted from January to September 2019, with an average monthly admission of 26 women (ranging from 21 in January and April, to 33 in May 2019). See figure 11 below.

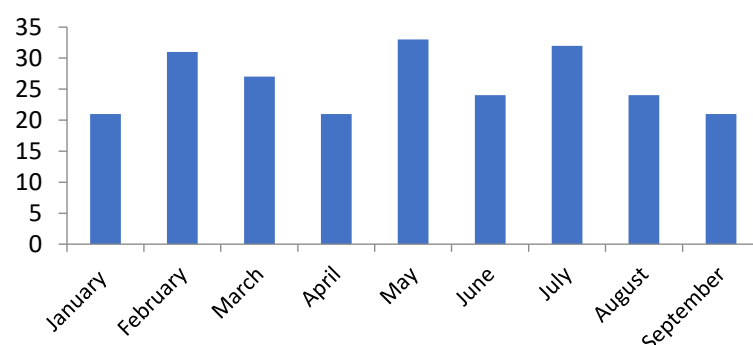


Figure 11: Number of women admitted to MWH, Kabo health centre, January - September 2019

Data from 2018 and 2017 was not available for analysis, but midwives from Kabo HC reported that the utilisation of services and community acceptance has increased over time. Women have reportedly even started to enquire about the maternity waiting home during ANC consultations. In 2019, of all women admitted at the MWH nearly three quarters (74%) were referred by CHWs/TBAs

from the periphery, 17% by ANC and 7% by outreach teams. This demonstrates that CHWs/TBAs play a crucial role in the promotion of the MWH and institutional delivery. See table 17 in annex 6.7. The majority of the women came from the Gbazara road (41.5%), followed by Farazala road (39.7%) and Moyen Sido (17.5%). The latter also has an MSF-supported HP at the other end of the road. Behili is still severely underrepresented at 0.9%, reflecting its geographical isolation and the lower coverage of MSF-supported DMC activities. See table 18.

Focus group discussions with community members and pregnant women in the MWH, also confirmed that this service and institutional deliveries are becoming more popular, and that TBAs have a positive influence.

Supporting factors encouraging women to use the MWH are satisfaction with the quality-of-care provided, free food during the stay, the company of other women and motorbike referrals for women with danger signs in pregnancy. Free food was also highlighted as a positive by male community members. Inability to find caretakers for older children while women used the MWH, was cited as the main hindering factors. Kabo HC, unlike other HCs, accepts older children and caretakers, but food is only provided for pregnant women.

#### Deliveries

With an average number of admissions of 26 women per month in the MWH, the increase in the number of institutional deliveries remains relatively modest.

Throughout the period 2016-2018, the total number of deliveries at health facilities supported by MSF remained relatively constant at around 1,700 per year, with a monthly average of 144 deliveries. With 1,420 recorded deliveries up until September 2019, the monthly average has increased slightly to 158/month. See table 5 below.

	2016	2017	2018	2019 (to Sept)
Kabo HC	1,225	1,357	1,375	1,181
Moyen Sido HP	251	256	282	232
Farazala HP	135	64*	33**	0
Gbazara HP	139	57*	0	7
<b>Total</b>	<b>1,750</b>	<b>1,734</b>	<b>1,690</b>	<b>1,420</b>
Average number of deliveries per month	146	145	141	158

\*Disengagement of MSF in March 2017 \*\* Temporary support by MSF during malaria peak

**Table 5: Number of deliveries 2016 - Sept 2019, MSF Kabo project**

The HMIS database does not include patient's place of residence. Therefore, we were not able to analyse the proportion of women from the periphery delivering in a health facility. The midwives interviewed from Kabo HC, had the impression that the percentage of women from the periphery receiving ANC did not increase, but that home deliveries have been decreasing with the introduction of the MWH.

#### Maternity waiting home perception

*"The TBA advises us to go to Kabo. Before, we had our children at home. We are happy with the maternity waiting home. We want to thank the person who invented it. They take care of us."*

FGD with women in community

*"We men are not worried when they are in the maternity waiting home. They sleep well, they eat well. They take good care of them."*

FGD with men in community



## 4 Conclusion and discussion

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Overall, we can conclude that the decentralised models of care as implemented in MSF OCBA's Kabo project are relevant and an effective response to the identified needs in this given context. Several appropriate adaptations of the strategy were made, though some areas for improvement were identified and effective solutions for some persisting challenges are still pending.

### Relevance

There is no doubt about the relevance of the Kabo project community strategy, given the lack of access to facility-based healthcare caused by periodic violence, insecurity, distance and limited available transport for the rural population in the periphery area.

### Appropriateness

The Kabo community strategy is distinguished by an appropriate combination of 1) community based case management for the vulnerable population (i.e. the main killer childhood diseases and systematic – preventive – treatment for malaria, iron folate supplementation and deworming for pregnant women); 2) an MSF-financed motorbike referral system to higher-level care for severe cases; 3) strong health promotion activities, defaulter tracing and mortality surveillance – though underreporting is still suspected; 4) periodic decentralised activities for vaccination and ANC; 5) community participation, particularly in the start-up phase; 6) good geographical coverage of community treatment points on the three main road and in camps populated by the nomadic Mbarara community.

Some appropriate adaptations have been made over time as understanding of the context grew. Other than originally planned, no antibiotic treatment of ARI is provided by CHWs. Instead, these patients are referred to a health facility for further treatment. Given the workload and the low capacity of the CHWs, mobile health educators were added after one year to strengthen health promotion activities, defaulter tracing and mortality surveillance. The mobile nature of the position, with overnight stays in villages, excludes women from this role. Therefore, it is important to find other ways to include women in health promotion activities in the periphery area.

However, the strategy lacked consistency with regards to the target groups for community case management. Budget restrictions and supply problems were given as reasons for deviations. It is therefore a positive step that all MSF operational centres present in CAR, have recently decided to request Global Fund-financed malaria medications for their projects.

The disengagement of MSF from two HPs in 2017 weakened the access to functional PHC facilities in the area. Budget limitations was given as the main reason for this operational choice, together with analysis that MSF could have more impact with community-based activities than continuing to support the two HPs. However, MSF overestimated the capacity of the handover partner in Gbazara and underestimated the negative impact of the cost recovery system in Farazala HP. Partial reengagement in Farazala HP, with a light support from MSF, was limited to the malaria peak in 2018. This gap in healthcare access persists. The mission has proposed to restart a similar partial support to Farazala HP COGES in 2020.

Another gap is the lack of a proper contingency plan for the supply of the community points during times of insecurity (beyond the assumption that CHWs will still be able make their way to the MSF base). Additional solutions like village-based *runaway* backpacks, and other measures e.g. safe places to secure medical stock without putting CHWs or other community members at risk, should be explored jointly with the communities.

The DMC model was designed exclusively by MSF, but great effort was made to inform, consult and involve the community during the start-up phase. However, the degree of community involvement varied depending on the capacities and priorities of the staff. Some of the initial good practice and

expertise were lost with the turnover of international staff and the limited availability of easily accessible technical guidance documents. Therefore, the finalisation of the community engagement strategy and the DMC toolkit are of great importance.

Community perception of their involvement in the programme is very positive, with clear acceptance of the model. However, there is still a need to increase their level of ownership of the CHWs. A formal community feedback mechanism is also pending. Piloting the originally planned “monitoring committees” could be a first step to counterbalance the power position of community leaders and CHWs. The patient satisfaction survey at Kabo HC is a great initiative and this is a good opportunity to include some DMC-related questions for patients from the periphery.

Several new areas have been identified by the project that could benefit from decentralisation at the community level, namely ambulatory therapeutic feeding for malnutrition and care for survivors of sexual violence. Integrating therapeutic feeding for acute malnutrition at the community level on the days when the periphery nurse supervisor works, could be a feasible solution. Identifying and training TBAs as focal points for survivors of sexual violence, equipping them with emergency contraception and ARVs for post exposure prophylaxis of HIV infection, sounds very convincing too. But before implementation it is important to do a thorough community assessment including a risk analysis of the activity in order to develop a model that is tailored to the specific needs of the context. This process should be led by women, include women and involve female health promoters. Currently, all mobile health educators along the main roads are male.

### **Effectiveness**

After initial challenges due to insecurity and the temporary suspension of MSF activities in the periphery in 2017/2018, the new community strategy was effectively implemented with overall good results.

### **Main observed changes that could be at least partially an effect of the new community strategy:**

1) Improved access to healthcare in the periphery; 2) changes in the perception of illness and health-seeking behaviour; 3) an observed reduction of community-based mortality, hospital mortality <5-years and CFR of malaria; 4) reduction of severe diarrhoea cases; 5) increased utilisation of the maternity waiting home (though other factors such as general improved security may also have contributed to some these changes).

Accessibility of health services increased substantially with the implementation of community case management in the periphery, decentralised interventions for vaccination and ANC, and motorbike referrals for severe cases to higher-level care. An impressively high number of patients have received care at community treatment points, and with improved security, outreach activities for vaccination and ANC have also become more systematic.

This said, motorbike referrals are still limited to severe cases, are not available on Sundays or at night, and not at all on the Behili road. One third of the cases referred by foot still do not reach the health facility. These unresolved challenges still need to be addressed. Providing villages with bicycles for referrals could be one solution to mitigate this situation.

Access to ART also increased through the creation of CAGs, with a positive effect on the adherence and viral suppression of CAG members. Removing the burden of monthly travel to Kabo HC has been a big relief for patients. Transport for CAG representatives to collect ARVs is covered by MSF motorbike taxis, an effective solution given the absence of public transport. When MSF decides to withdraw from the Kabo project, it will be important to explore early on other feasible transport options to ensure access to ART for CAG members continues. Peer support for adherence and psychological coping with the HIV serostatus and stigma and discrimination, is another positive effect.

Improved accessibility to healthcare, together with health promotion activities, has also contributed to important changes in the perception of illness and in health-seeking behaviour towards modern medicine, particularly for malaria and deliveries. Engaging with traditional healers remains an important issue to address.

Quantitative results also indicate a possible reduction of community mortality in the periphery. However, we know that this data is difficult to gather and prone to underreporting. Compared to 2016, at the facility level there is also an observed reduction in hospital mortality among children <5-years; in overall hospital mortality; in early hospital mortality among children <5-years; in malaria CFR and the proportion of severe acute bloody and non-bloody diarrhoea. We assume that the new community strategy may have contributed to these results.

More patients are also using the MWH after referral advice given primarily by TBAs, with free food a strong incentive. The number of deliveries also increased slightly in 2019. However, not knowing where to leave older children during patient stay at the MWH is a perceived barrier. Proactively engaging with the community could help find a solution for this.

Communities highly appreciate the improved access to healthcare and are satisfied with the quality-of-care provided by CHWs/TBAs and staff in referral health facilities. Main perceived areas for improvement are exclusion of adults, temporary stockouts of medicines, limited number of motorbike taxis, lack of mosquito nets and lack of MSF support for Farazala HP. Communities have also heard rumours that MSF plans to leave Kabo. When this happens, it will be very important to involve the community in planning the exit strategy and a feasible future model of community-based care without MSF.

**Main strengths in implementation:** 1) strong community involvement particularly during the start-up phase; 2) the initial transparent CHW recruitment process; 3) focus on practical training and regular refresher training for CHWs; 4) MSF-paid motorbike referral system; 5) good health promotion activities (though technical support is needed to incorporate new participatory methodologies); 6) complementary decentralised interventions for vaccination and ANC; 7) more regular supervision as of 2018/2019; 8) the introduction of CAGs.

**Main challenges:** 1) low level of education of CHWs/TBAs requiring regular supportive supervision and refresher training; 2) insecurity e.g. in 2017/2018; 3) budget limitations; 4) distance from health facilities and difficult road access/no motorbike referral on the Behili road; 5) the extremely high number of patient consultations recorded in community treatment points, which indicates a problem either in data collection or of increasing patient numbers on paper to divert tests and medicines. This should be investigated. Regular monitoring of numbers of consultations could help detect such problems in a timelier manner.

Insecurity and budget/staff restrictions limited the frequency of supervision activities. Insecurity also affected regular supply to community treatment points. Given the low level of education of CHWs/TBAs, the need for supportive supervision and refresher training to ensure quality-of-care must not be underestimated. It is important not to overload CHWs with too many tasks, given their limited capacity and the fact that they are part-time volunteers with a modest incentive.

**Enabling factors for success:** 1) good technical support from the humanitarian anthropology/health promotion/community engagement advisor during the planning phase; 2) willingness of the country and coordination project staff to roll out the programme in a systematic manner supported and backed up by the cell and technical advisors; 3) good understanding of the local context; 4) good negotiation skills with armed actors; 5) long-term, experienced Central African staff for training and supervision.

## 5 Recommendations

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### **For the Kabo project – MSF OCBA CAR mission**

#### ⇒ **Further strengthen CHW/TBA capacity:**

- ✓ Ensure regular supportive supervision and refresher training by dedicated staff, with enough time planned for this activity. Due to the current workload, there is a need for one periphery nurse supervisor for CHW/TBA and the Moyen Sido HP, and one for outreach activities.
- ✓ Continue negotiation with leaders of Mbarara camps to enable supervision on site.
- ✓ Monitor and document learning progress of CHW/TBA.
- ✓ Support the team with training material and advice on the use of participative methodologies. Simulation exercises could complement practical training in Kabo HC.

#### ⇒ **Improve transport options for urgent referrals at night, on Sundays, on the Behili road and for patients who do not fall under the motorbike referral criteria:**

- ✓ Discuss and explore options with communities. Finding a solution for distant villages along the Behili road is a priority.
- ✓ Consider providing bicycles for referrals that would be managed by the monitoring committee.
- ✓ Consider expanding motorbike taxi referral criteria to include women with normal pregnancy who want to deliver in a health facility.

#### ⇒ **Strengthen health promotion:**

- ✓ Provide technical support for the team to incorporate new tools and methodologies. This could be achieved by creating a permanent flying position for health promotion/community engagement at country level.
- ✓ Ensure participation of female health educators in the health promotion team in the periphery.
- ✓ Explore new areas of collaboration, in particular with school teachers, youth associations and women's groups.
- ✓ Consider the implementation of a knowledge, attitudes and practices survey, to measure the impact of health promotion activities.
- ✓ Carry out a health-seeking behaviour study to have a baseline and monitor changes.

#### ⇒ **Support access to PHC to assure continuum of care:**

- ✓ Restart light support for Farazala HP COGES, if budget allows.
- ✓ Advocate with MENTOR to improve supply and supervision at Gbazara HP.

#### ⇒ **Develop a contingency plan for supply and supervision for community treatment points during periods of insecurity:**

- ✓ Explore and discuss options for different scenarios with communities, including supply at the MSF base when possible, but also runaway bags with contingency stock kept at village level.

- ✓ Include risk analysis to ensure that risks are not transferred from MSF staff to CHWs, or other community members.
- ⇒ **Strengthen community participation and engagement:**
- ✓ Community participation is an important activity that needs to be planned. A community perceptions survey could help to improve understanding and support the design of the action plan.
  - ✓ Support the creation of community monitoring committees for healthcare, composed of women and men, to monitor effectiveness of the CHW/TBA work and feedback to MSF.
  - ✓ Include periphery and DMC-relevant questions in the patient satisfaction survey at Kabo HC.
  - ✓ Ensure a harmonised and transparent recruitment process of CHWs.
  - ✓ Foster community engagement to support CHWs, given their modest incentives and time lost to work on their fields/earn money.
- ⇒ **Prepare the development of a community-based strategy to support survivors of sexual violence, tailored to specific needs and context:**
- ✓ Conduct a thorough community assessment led by women that includes a risk analysis of the activity.
  - ✓ Engage women from the community and involve female health educators.
- ⇒ **Engage with traditional healers and explore options to include them in the referral pathway.**
- ⇒ **Timely planning for potential future MSF exit and handover:**
- ✓ Explore alternative feasible transport options to ensure continuous access to ART for CAG members.
  - ✓ Involve the community in the planning of the exit strategy and discussions of a feasible future for the model of community-based care without MSF.
- ⇒ **Investigate reasons for very high numbers of consultations at the community treatment points and introduce a continuous monitoring system:** e.g. quarterly calculation of numbers of consultations per age group in the respective catchment population.

### **For MSF OCBA headquarters**

- ⇒ **Finalise the community engagement strategy and the DMC toolkit, including training material for CHWs and disseminate to the field. Create a mobile implementation officer position for DMC to provide technical support to projects and the country coordination team.**
- ⇒ **Develop a framework for improved monitoring of DMC activities at project, coordination and cell level:**
- ✓ This should include baseline indicators and follow-up indicators for the various expected results, to measure progress and impact.
  - ✓ Finalise integration of DMC activities in HMIS to facilitate joint monitoring of activities.

## 6 Annex



### 6.1 Terms of reference

#### TERMS OF REFERENCE / 03.06.19

#### Evaluation of decentralised models of care in DRC, CAR and South Sudan

Commissioned by	DRC, CAR and SSD missions/cells
Commissioner	José Luis Dvorzak (DMC Advisor MSF-OCBA)
Commissioned to	Vienna Evaluation Unit
Time period evaluated	2017 - 2019
Duration of evaluation	July – December 2019
Expected start date	July 2019
ToR elaborated by	José Luis Dvorzak, Cristian Casademont, Maitane Azkarraga, Liliana Palacios, José Mas, Sylvain Groulx, Mohamed Eltom, Mónica Camacho

#### 1. CONTEXT

Decentralised models of care (DMC) depict the implementation of care outside of health facilities or outside of its usual facility, and closer to patients in order to make medical activities (curative and preventive) more accessible to those populations (*according to MSF-OCBA SP 2014-2017*).

DMC can be divided in two main interventions:

- 1) Community based interventions: activities implemented by CHWs/TBAs in the community, they are members under incentives of those communities where the activities are implemented, the skills are mainly low and the number of activities should be limited to the skills.
- 2) Decentralised interventions: activities implemented in the community but originated in the facility, with MSF higher skilled staff. Includes “one shot” interventions, mobile clinics, vaccination campaigns in the community, etc.

This evaluation will focus on community-based interventions and decentralized interventions focusing on the implementation of activities close or inside the community rather than within a centralized medical facility. This approach is a transversal methodology meaning any activity that can be re-designed for a community setting, rather than a centralized setting, would fit the concept. For MSF, any decentralized approach can improve access to medical care, leading to our overall goal of reducing morbi-mortality.

The DMC strategy encompasses the designing and planning of activities including community-based interventions (with a community involvement at the core of the design) and decentralized interventions or both. The main objective of these community strategies is to improve access to healthcare of vulnerable populations (situation of conflict, violence, displacement, etc.) facing barriers to reach care in formal facilities. As these strategies must be adapted to the contexts, the specific particularities of each project must be taken into account and a new model needs to be created in every case tailored to this specific situation. The scope of options and variability of this

strategy can include a broad spectrum of activities and these must be selected according to the needs of the populations identified by MSF.

The main component of this strategy is the community case management approach focusing on primary healthcare level activities with an emphasis on increasing access and quality of care at community level as well as strengthening preventive measures, community knowledge and practices as well as community mobilization. In the community-based model networks of community workers (community health workers and traditional birth attendants) are chosen in villages outside of walking distance of a health facility. These workers are trained to provide treatment for specific diseases to people who cannot access formal health facilities and to identify alarm signs to be able to refer cases that cannot be treated by them. The community workers are trained and supported by a supervisor who reports to the local health facility.

The DMC strategy has been implemented by OCBA with this name for the first time in 2017 in Malakal project, South Sudan. In February 2017 it was implemented in Kabo and Batangafo projects in the Central African Republic (CAR). Before that, some similar interventions with these models were implemented. Since then several projects in different countries have implemented this strategy in both emergencies and regular projects. Currently, several DMC interventions have been approved to be implemented in many countries in 2019 or are in process of design/implementation (see Table 1).

Table 1. Description of countries and MSF-OCBA projects with DMC interventions (on-going, closed and in the pipeline), 2017-2019.

N	Project	Country	Cell	Status
1	Malakal	South Sudan	5	Opened in 2017 (on-going)
2	Kabo	CAR	3	
3	Batangafo	CAR	3	
4	Ansongo	Mali	2	Opened in 2018 (on-going)
5	Kidal	Mali	2	
6	NW Cameroon	Cameroon	EU	
7	SW Cameroon	Cameroon	EU	
8	Alindao	CAR	3 (Eureca)	Opened in 2018 (closing or closed)
9	Bocaranga	CAR	3 (Eureca)	
10	Kalonge	DRC	3 (RUSK)	
11	Salamabila	DRC	3	
12	Yambio	South Sudan	5	Starting soon or pending approval in 2019
13	Ulang	South Sudan	5	
14	Al-Zuhra	Yemen	1	
15	Baidoa	Somalia	5	
16	Douenza	Mali	2	

As this strategy is relatively new in MSF-OCBA and is becoming more relevant in medical operations, it is necessary to evaluate the activities that have already been implemented with the aim to learn how access to healthcare was modified and how the efficacy of the interventions can be improved. It is also crucial to better understand enablers and constraints of this strategy.

South Sudan, DRC and CAR are selected for the first DMC evaluation because these were the first countries where DMC strategies were designed and implemented. As enough time passed since the implementation of the first experiences and a considerable corpus of information was already collected about the projects, it is now time to compile and analyse this information in the form of an evaluation, with the aim of knowing if the initial goals of the strategy were achieved and to get a summary of lessons learned to be replicated in future interventions.

## 2. OVERALL OBJECTIVE and PURPOSE

### **OVERALL OBJECTIVE, PURPOSE and USE**

Evaluate the community activities implemented in DRC, SSD and CAR with a particular focus on changes in access to healthcare, effects of DMC on higher levels of care (Hospital, PHCC), community perception of the DMC and specific aspects of DMC strategy (design, implementation, set-up).

MSF OCBA aims to derive lessons learned from DMC implementation in 3 contexts to improve the performance of community activities in the current and future interventions.

The results will be used both by operations and the medical department to inform the decision making in current and future DMC interventions.

### **SPECIFIC OBJECTIVES**

- To evaluate the effect of the community strategy in terms of access to healthcare
- To evaluate the consequences of the strategy on the workload of the staff in the higher levels of care (Hospitals/PHCC)
- To evaluate the participation of the community in the planning (co-design) and implementation of DMC activities (ownership, acceptance, perception, perceived impact and benefits, etc.)
- To evaluate specific aspects of DMC interventions (design, implementation and set-up)
- To identify enabling and constraining factors during the implementation of DMC interventions for the improvement of the performance in current and future interventions

### **Out of scope**

The revision of the global DMC strategy as such is out of scope of this evaluation.

## 3. KEY EVALUATION QUESTIONS

### CASE STUDIES

#### **1. Relevance**

- How was the design of each DMC model informed by the identified needs and the context?

#### **2. Appropriateness**

- Were appropriate adaptations made in the approach with enhanced understanding of the situation?
- Did new health needs that have not been tackled arise throughout the period of the implementation?
- To what extent did the community participate in the process (co-design, planning, implementation)?
- Are community-based activities aligned with or adapted to MoH/WHO community-based care policies

#### **3. Effectiveness**

- Were the DMC activities carried out as originally planned? To which extent the objectives have been achieved?
- Access: How the access to healthcare evolved after the implementation of DMC? How the communities in the catchment areas have modified their health seeking behaviour since the DMC approach started? Malaria data will be used as a proxy to evaluate the access (to check the hypothesis of increased number of malaria cases received at community and



primary healthcare level and decreased case fatality rate of severe malaria in the hospital (especially less than 48 hours after admission)

- Consequences on higher levels of care: What consequences do the community-based interventions have on the activities at higher levels of care (Hospital/PHCC)? For example, in the quantity and quality of consultations done in the higher-level facility.
- Perception: How are the DMC related services perceived by the communities?

#### TRANSVERSAL ANALYSIS

- What are the common enablers and challenges that can be extrapolated from the projects?  
Commonalities and differences in:
  - Community workers: Recruitment process, skills before and after training and task shifting
  - Referral/counter-referral system
  - Training and supervision activities
  - Surveillance system/data collection
  - Health promotion and community engagement activities
  - Relationship of the DMC with higher levels of care

#### 4. PROJECT REQUIREMENTS

- Ideally, having activities in the community with CHWs/TBAs/HPs-HEs and the members of the community
- Project has been open for a minimum of 1 year (and retrospective data is available)
- Expected duration: minimum of 1 to 2 years (to allow for follow-up post evaluation)
- Projects proposed:
  - ✓ South Sudan: Malakal project
  - ✓ CAR and DRC: available projects to be confirmed

#### 5. PRACTICAL IMPLEMENTATION OF THE EVALUATION AND GOVERNANCE

<b>Number of evaluators</b>	2	
<b>Timing of the evaluation</b>		
<b>Required amount of time (days);</b>	<i>Evaluator 1</i>	<i>Evaluator 2</i>
<b>Inception Phase (Days)</b>	15	15
<b>Data collection Phase (Days)</b>	45	45
Data collection from off-site & data collection in DRC, CAR and South Sudan		
<b>Analysis and Reporting Phase</b>	32	32
Analysis and development of case study reports and compiled report		
<b>For presentation (Days)</b>	2	2
<b>Total time required (days)*</b>	<b>94</b>	<b>94</b>

## 6. EXPECTED RESULTS and INTENDED USE OF THE EVALUATION

### Phase 1: Inception Phase

- In-depth inception report incl. spelled out data collection instruments (e.g. topic guides for interviews with MSF staff).

Requirement: Clearly depicted methodology to allow transversal application by different evaluators in three projects.

### Phase 2: Case study phase

- Presentations
  - Presentation of evaluation plan for projects prior to visits
  - Debriefings in each project/mission
  - Virtual presentation to missions and projects where the evaluation has been conducted
  - Presentation of findings to OCBA audience
- Reports with findings and recommendations; general recommendations and mission/context specific recommendations
  - Case study report CAR including integration of quantitative analysis of Malaria data endorsed by Commissioner and VEU
  - Case study report DRC endorsed by Commissioner and VEU
  - Case study report South Sudan endorsed by Commissioner and VEU

### Phase 3:

- Overall report with common findings and general recommendations on community activities designed to improve planning, implementation, performance of staff, monitoring and quality of care in decentralized community activities in OCBA projects
  - Based on the transversal analysis: Concrete proposal of a document for improving the performance of OCBA in the implementation of community activities
- Presentations:
  - A presentation of the final report will be done at HQ in Barcelona
  - Presentation at the HoM/MedCO week 2020

### INTENDED USE

#### OPERATIONS AND MEDICAL DEPARTMENT

1. Medical department to develop appropriate tools
2. Operations department to commit to implementation of tools and recommendations in future DMC interventions

## 7. TOOLS AND METHODOLOGY PROPOSED

- Review and analysis of project documents
- Interviews with key-team members at HQ and field levels
- Interviews, focus group discussions with MSF-CHWs/TBAs/HP-HE, health centre/health post staff and hospital staff
- Interviews with key informants (e.g. health professionals from MoH or from the facilities, community gatekeepers)

- Interviews, focus group discussions with patients/former patients
- Observations
- Examination of files and registers
- Quantitative and qualitative data gathering and analysis

## 8. DOCUMENTATION FOR READING

- Project documents (log frames, situation reports)
- Medical reports (in the facility)
- Guidelines
- Data files
- DMC relevant documents

## 9. STAKEHOLDERS AND INTERVIEWEES

### KEY STAKEHOLDERS

- Dir Ops, Cell 3, Cell 5, Cristian Casademont (MedOps); José Luis Dvorzak (DMC referent)
- Other stakeholders:
  - Operations: HoM, MedCos, PMRs; FieldCos, staff in field
  - Medical department:
  - Other members of medical department

- Beneficiaries

### INTERVIEWEES

- CHWs/TBAs/MW/Nurses/COs/Hos/doctors/staff in the field, capital level and HQs
- Beneficiaries in the communities and in some facilities

## 10. PROFILE/S OF EVALUATOR/S

### Evaluator 1 – medical profile

- Medical/paramedical degree
- Proven experience in health promotion/community engagement
- Operational/managerial experience
- Solid experience in applying techniques of qualitative data collection and analysis
- Experience in conducting evaluations
- Experience in collection and analysis of quantitative data
- Understanding of the relevance of community activities in resource-limited countries
- Excellent analytical skills with attention to detail and drawing well-grounded conclusions
- Proven report writing and presentation skills
- Working experience in MSF is a strong asset
- Very good written and spoken English and French

### Evaluator 2 – skilled in qualitative research

- Academic degree in relevant field
- Long standing experience in designing and applying techniques of qualitative data collection and analysis
- Very good communication skills
- Working experience in MSF is a strong asset
- Proven report writing and presentation skills
- Excellent analytical skills with attention to detail and drawing well-grounded conclusions
- Very good written and spoken English

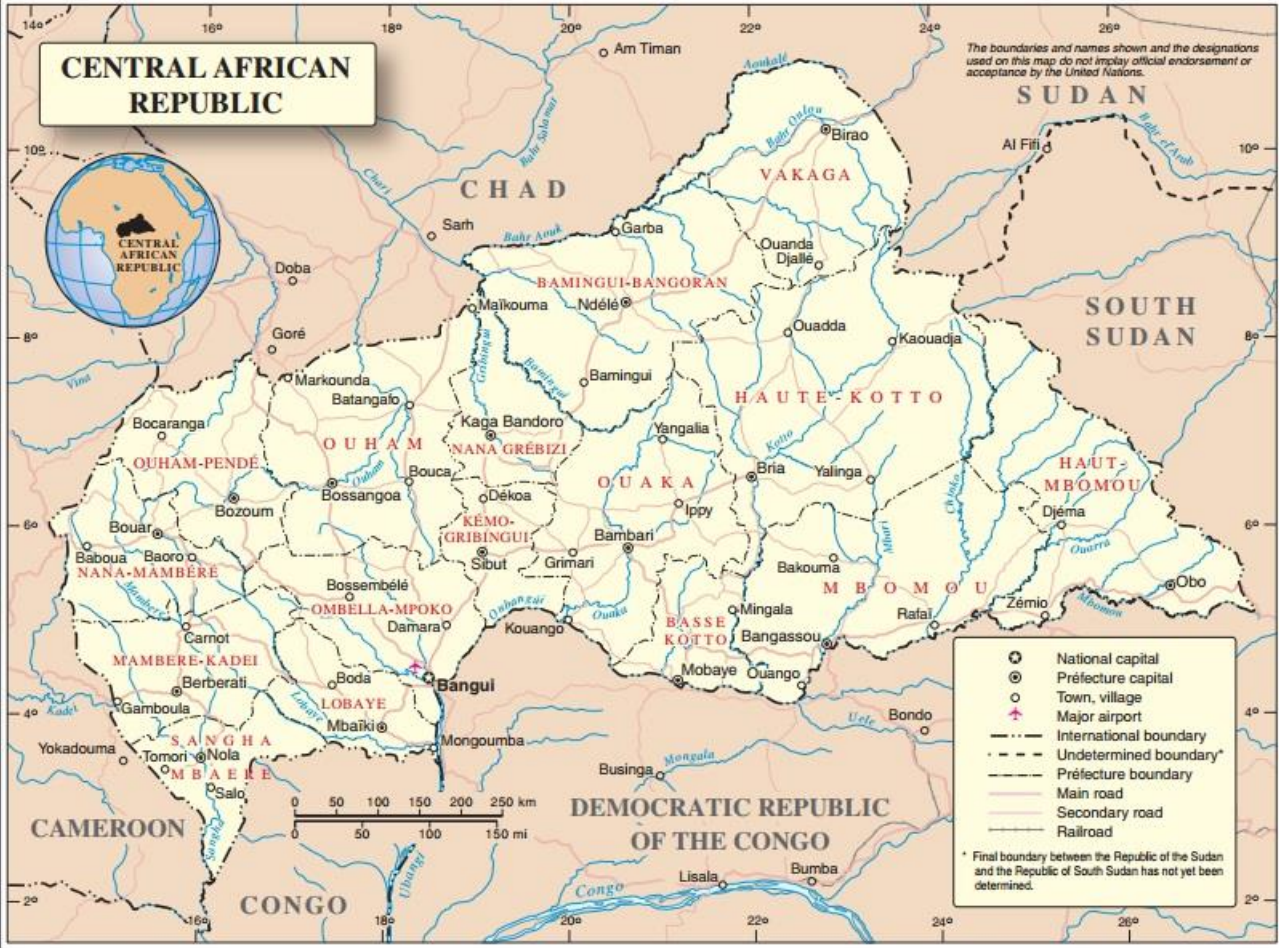
- Knowledge of French is a strong asset
- Previous working experience in MSF desirable
- Experience in conducting evaluations is an asset

Applicants meeting the criteria are invited to apply individually or as a team.

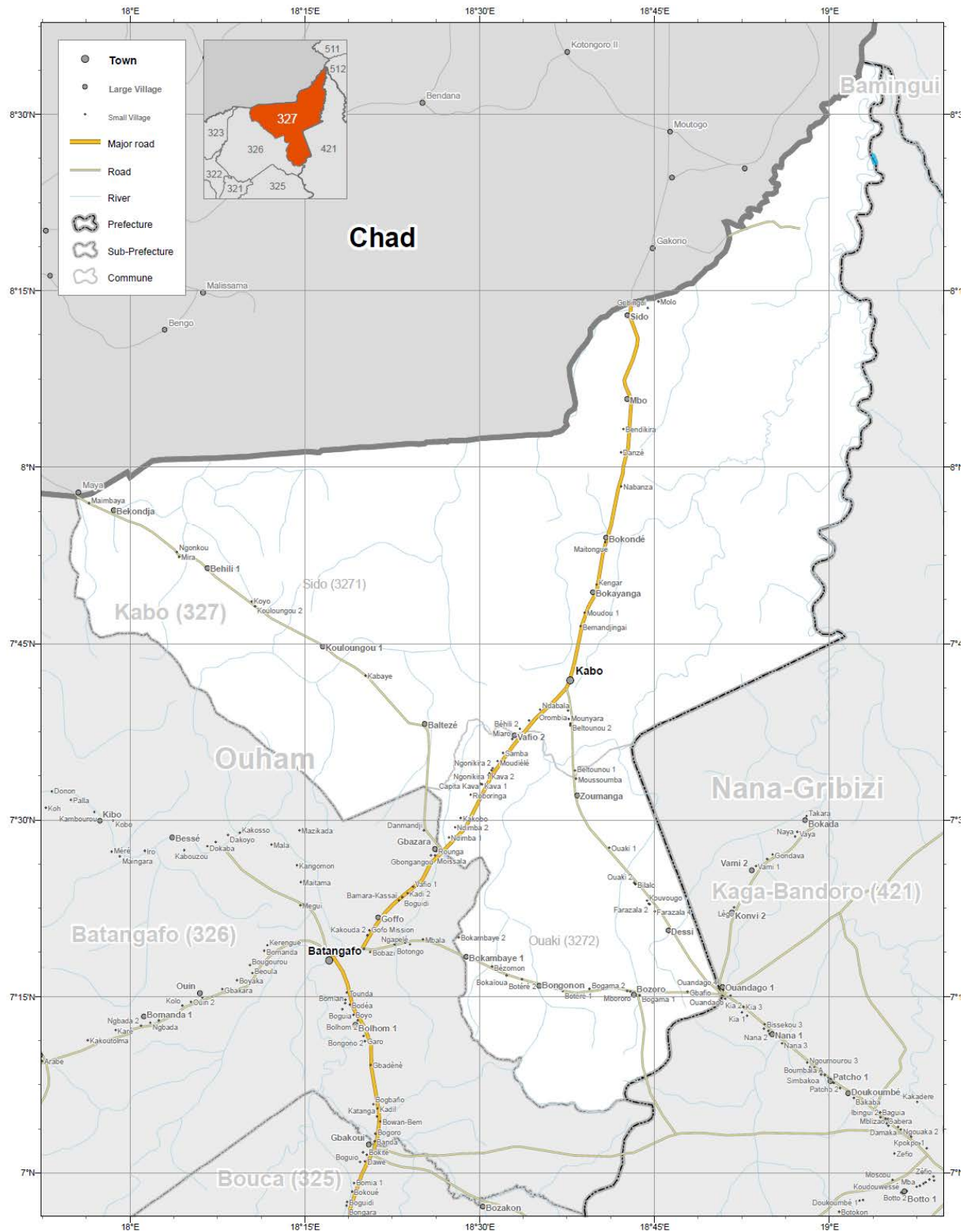
For the case study of the CAR project, in case of a need an experienced epidemiologist will support the team.

# 6.2 Maps

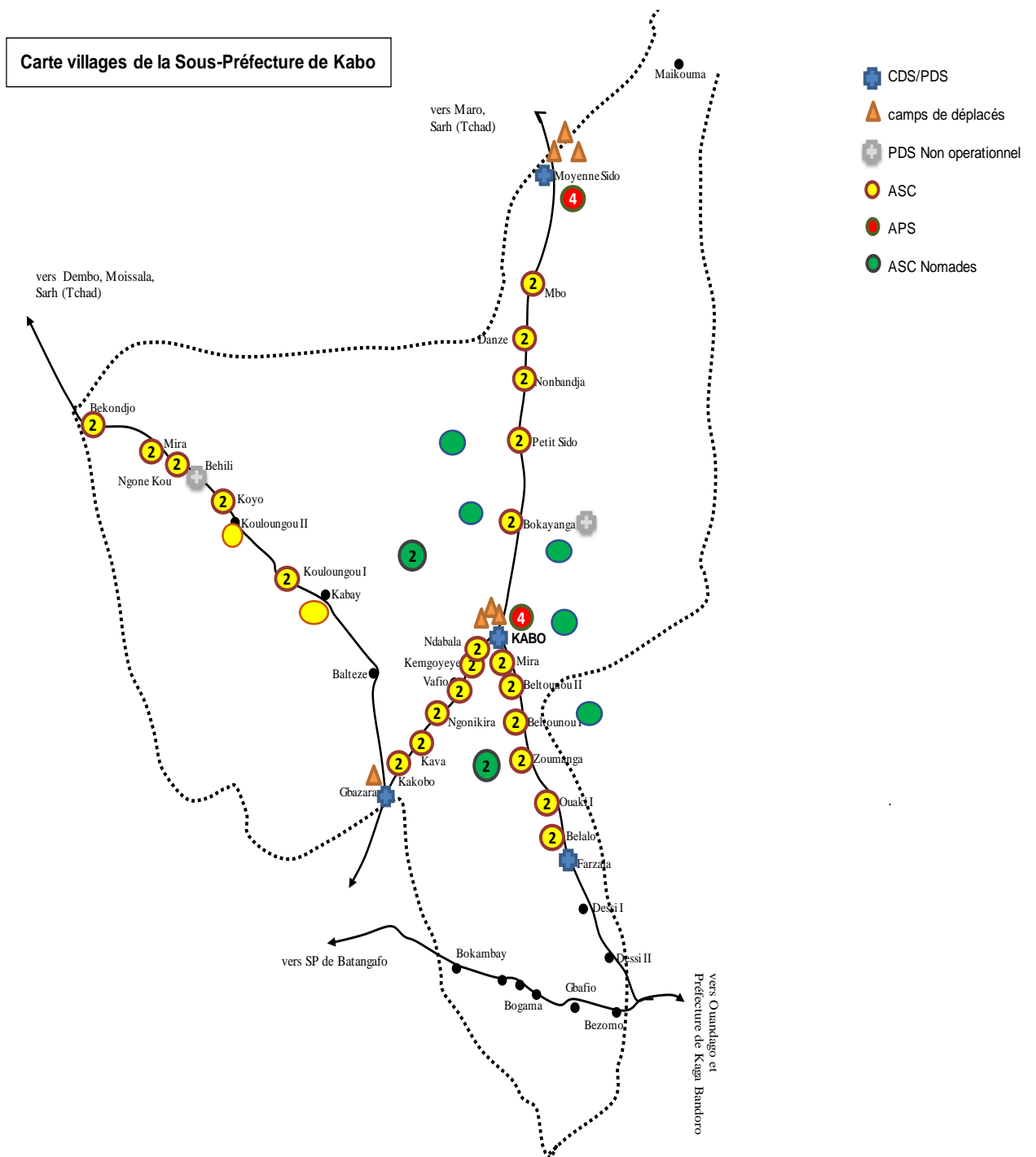
Map 1: Central African Republic



Map 2: Kabo sub prefecture



**Map 3: Distribution of community health worker treatment points, Kabo project**



## 6.3 Sampling strategy

### Site visits

- For **CHW treatment sites a typical sample of three sites** on the three main roads has been selected with the support of the Kabo project team to assess the functionality of the treatment sites and interview CHW/TBA pairs and community leaders/members. The sample included:
  - 1 site considered as very well performing, where postnatal care was recently added (Kakobo on Gbazara axe)
  - 1 site considered as medium well performing (Bokayanga, Moyer Sido axe)
  - 1 site considered as less well performing (Beltonou 1 , Farazala axe)
- **Both MSF supported health facilities in the project area:** Kabo HC (PHC and secondary healthcare) and Moyer Sido HP (PHC) as MSF supported health facilities to assess the effect of the community-based care on higher-level care
- **Formerly MSF supported health facilities in the project area:** Farazala HP (COGES managed); the visit of Gbazara HP, that was handed over to MENTOR in 2017, had to be cancelled due to unforeseen time constraints.

### Interviews and focus group discussions

Purposive sampling has been used for the selection of the groups of interviewees with the objective to reach all the groups of informants that were relevant for this evaluation. Some of the individual patients/care takers were selected on convenience depending on their availability during visit of Kabo health centre:

- **MSF key informants:** key informants from Barcelona head quarter including current and former members of the operational cell in charge of CAR, current and former technical advisors, current and former key project and country coordination staff members to explore the rationale for the development of the current DMC strategy, its relevance, appropriateness, effectiveness and supporting and hindering factors for success. Most were semi-structured individual interviews. A focus group discussion was held with health promoters from the different roads, Kabo town and Kabo HC.
- **Other health actors** including MoH, UNICEF, MENTOR and MSF OCA were interviewed to explore the relevance and appropriateness of MSF OCBA's DMC strategy in Kabo, aspects of coordination and complementarity as well as contextual factors that may have favoured or hindered the project's achievements.
- **Health workers** were interviewed in each of the visited sites, either individually (Kabo HC and Moyer Sido HP) or in a group together with COGES Members in Farazala HP primarily to explore the effects of the community based DMC strategy on higher-level care and the effects of the disengagement of MSF of Farazala HP on the accessibility to PHC on Farazala axe.
- **CHW/TBA** were interviewed in
  - 3 CHW/TBA pairs in the 3 visited sites
  - 2 focus group discussions with CHW from roads/camps that could not be visited: 1 with CHW from Behili axe (recently reopened), 1 with CHW from the Mbarara camps. Both of these focus group discussions were held in the Kabo MSF base.
- Among the **beneficiaries** the following groups were selected for interviews to explore their perception of the level of community participation/engagement in planning and managing the community treatment sites, potential changes in access to healthcare, barriers in accessing care, potential changes in their health seeking behaviour and their perception of the quality of service delivery at community treatment sites and health facilities after referral to higher-level care and in the case of people living with HIV (PLHIV) the perception of the effects of CAGs on continuous access to ARV treatment.
  - **Male community leaders/members:** 3 focus group discussions, 1/per visited community treatment site and 1 1 Focus group discussion in Moyer Sido



- **Female community leaders/pregnant women and mothers of children < 5 years of age:** 3 focus group discussions, 1/per visited community site and 1 in Moyen Sido
- **Patients and care takers of children** from the periphery that had been referred or self-referred to Kabo HC. Individuals were sampled on convenience in the waiting area of the OPD, the paediatric ward, the maternity ward; a focus group discussion was held with pregnant women present at the maternity waiting home.
- **Leaders of community ARV groups (CAGs):** 1 focus group discussion was held with male and female leaders of 8 CAGs (2 from Moyen Sido town, 1 from Gbazara axe, 2 from Farazala axe, 3 from Kabo town) to explore the perception of the effects of CAGs on continuous access to ARV treatment.
- **COGES members: a focus group discussion with** COGES members Farazala HP together with health workers of Farazala HP to explore the effects of the community-based DMC strategy on higher-level care and the effects of the disengagement of MSF of Farazala HP on the accessibility to PHC on Farazala axe.

**Table: Sites visited and groups of people interviewed during field work**

Axe	Sites visited	Health Centre	Health post	Community treatment site	MSF key informants	Health workers	Health promoters	CHW/TBA	FGD Male community leaders/members	FGD Female community leaders, members	Individual patients/care takers	CAG members	COGES	MoH	UNICEF	MENTOR
Skype					X											
Bangui					X									X	X	X
Kabo		X			X	X	X	X			X	X				
Moyen Sido	Moyen Sido		X			X			X	X						
	Bokayanga			X				X	X	X						
Gbazara	Kakobo			X				X	X	X						
Farazala	Farazala		X			X							X			
	Beltonou I			X			X	X	X	X						

## 6.4 Kabo project overview

The table below gives an overview on the current Kabo project, its components and main service packages.

<b>Target area</b>	Kabo sub prefecture and part of Moyen Sido sub prefecture
<b>Direct beneficiaries</b>	Ca. 66,234 (excluding Gbazara)
<b>General objective</b>	Reduction of morbidity and mortality among the population of Kabo sub prefecture
<b>Specific objective</b>	The population victim of violence of Kabo sub prefecture receives free quality healthcare in the facilities supported by MSF by the MSF supported network of community health workers (CHW).
<b>Component 1</b>	<b>Community healthcare</b> (started in April 2017)
<b>Permanent village based</b> <ul style="list-style-type: none"> <li>• Gbazara</li> <li>• Moyen Sido</li> <li>• Farazala</li> <li>• Behili (suspended from mid-2017 to August 2019)</li> <li>• 7 Nomad camps (Feriks) for Mbarara population</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Target Group:</b> Children &lt;15-years and pregnant and lactating women</li> <li>• <b>Pairs of male CHW and female TBA</b> in 31 villages and Nomads' camps distributed over 4 roads (total 31 CHW/TBA tandems ) on incentives <ul style="list-style-type: none"> <li>✓ <i>Malaria</i>: tests, treatment of simple malaria, referral of complicated malaria</li> <li>✓ <i>Diarrhoea</i>: treatment of simple diarrhoea, referral of complicated diarrhoea</li> <li>✓ <i>Acute respiratory tract infections (ARI)</i>: detection and referral</li> <li>✓ Passive MUAC screening</li> <li>✓ Systematic preventive treatment for pregnant women (Fansidar, Iron/folate, Albendazole)</li> <li>✓ Risk detection during pregnancy &amp; referral</li> <li>✓ Postnatal check-ups &amp; referral (recently started)</li> <li>✓ Referral for institutional deliveries</li> </ul> </li> <li>• <b>Motorbike referral</b> covered by MSF (minimum 1 bike/day/per axe, except for Behili axe)</li> <li>• <b>Referral by foot/bicycle</b> for non-urgent cases or out of motorbike hours</li> <li>• <b>Weekly supervision and refill</b> by periphery nurse supervisor</li> </ul>
<b>Health promotion &amp; surveillance</b>	<ul style="list-style-type: none"> <li>• <b>In total 14 health educators</b> (MSF staff) supervised by health promotion supervisor <ul style="list-style-type: none"> <li>✓ 10 in Kabo and Moyen Sido towns and health facilities</li> <li>✓ 4 mobile health educators, 1 per axe visiting all villages once/week</li> <li>✓ Health promotion</li> <li>✓ Surveillance (mortality, epidemics)</li> <li>✓ Defaulter tracing</li> <li>✓ Referrals to CHW or health facilities</li> </ul> </li> </ul>
<b>Outreach visits to villages</b>	<ul style="list-style-type: none"> <li>• Regularly scheduled: Up to 18 outreach visits /month</li> <li>• Vaccination, antenatal and postnatal care, malnutrition screening</li> <li>• Treatment of uncomplicated malaria and referral</li> </ul>
<b>Community ARV groups (CAG)</b>	<ul style="list-style-type: none"> <li>• Currently 9 CAGs in periphery, 12 CAGs in Kabo town</li> </ul>
<b>Component 2</b>	<b>Primary healthcare</b>
	<b>Moyen Sido health post</b> <ul style="list-style-type: none"> <li>• MSF supported health post north of Kabo at the Chadian border</li> <li>• Full package of primary healthcare (PHC) including deliveries and small inpatient admission for observation</li> <li>• Nearly 100% MSF staffed &amp; funded</li> </ul>

<b>Component 3</b>	<b>Secondary healthcare</b>
	<b>Kabo health centre (HC)</b> <ul style="list-style-type: none"> <li>• Full package of primary and secondary healthcare including maternity and surgery</li> <li>• Maternity waiting home (2018)</li> <li>• Nearly 100% MSF staffed &amp; funded</li> </ul>
<b>Component 4</b>	<b>Emergency response</b>
	<ul style="list-style-type: none"> <li>• Epidemic surveillance &amp; response</li> </ul>
<b>Total budget 2019</b>	<b>3,053,046 EUR</b>
<b>Staff</b>	10 international staff, 183 national staff

## 6.5 Timeline key events and activities DMC strategy Kabo project

Year	Month	Activities/events
2013/2014		<ul style="list-style-type: none"> <li>From Kabo massive exodus of Muslim population to Chad. A lot of Seleka in Kabo, many security incidents, only MSF and ICRC present as medical NGOs</li> </ul>
2015		<ul style="list-style-type: none"> <li>No Antibalaka in Kabo, but many Seleka in the area. Armed elements without respecting the command of their own hierarchy. <b>Very volatile situation on the roads:</b> typical for chronic conflicts, thin line between criminality and armed groups. → <b>many incidents</b>, high security risk → problems of access to healthcare in the periphery/the roads, population movements between villages and bush.</li> </ul>
		<ul style="list-style-type: none"> <li><b>Intermittent preventive malaria treatment</b></li> </ul>
		<ul style="list-style-type: none"> <li><b>“One Shot strategy”</b> : mobile clinics whenever access was possible</li> <li>Package <ul style="list-style-type: none"> <li>Vaccination of U5</li> <li>Distribution of mosquito nets and soap</li> <li>&lt; 5 years : chemoprophylaxis de malaria</li> <li>Reproductive health : ANC, including Malaria prophylaxis, Iron/Folate, Albendazole, family planning</li> <li>Small curative package u</li> </ul> </li> </ul>
2016		<ul style="list-style-type: none"> <li><b>Situation still volatile.</b> Work in periphery suspended during 2 months after armed robbery in MSF compound</li> </ul>
		<ul style="list-style-type: none"> <li>During malaria peak, opening of community based <b>malaria treatment points “ points Palu”</b> with good results</li> </ul>
		<ul style="list-style-type: none"> <li>Visit of Health promotion and community engagement advisor and development and planning of the community based treatment strategy</li> </ul>
2017	Beginning of 2017	<ul style="list-style-type: none"> <li>Preparation of community based strategy : Meetings with community leaders, identification of village treatment sites, recruitment &amp; training of CHW/TBA tandems per road and for Mbarara camps</li> </ul>
	March	<ul style="list-style-type: none"> <li>Stop of MSF support to Gbazara et Farazala health posts <ul style="list-style-type: none"> <li>Gbazara handed over to MENTOR</li> <li>Farazala handed over back to COGES with cost recovery system</li> </ul> </li> <li>Training rounds for Gbazara and Farazala roads finalised</li> </ul>
	April	<ul style="list-style-type: none"> <li>Armed robbery at MSF compound in Kabo</li> </ul>
	mid-April to mid-July	<ul style="list-style-type: none"> <li>MSF Skeleton team: suspension of activities in the periphery</li> <li>→ no supervision &amp; supply, but CHW come to MSF base for supply of medicines</li> <li>→ some CHW lost</li> </ul>
	May	<ul style="list-style-type: none"> <li>CHW/TBA working on Gbazara and Farazala roads <ul style="list-style-type: none"> <li><b>Target group</b> : &lt; de 15 years and pregnant &amp; lactating women, adults during malaria peak</li> <li><b>Curative package</b> : uncomplicated malaria and diarrhoea, referral of acute respiratory tract infections (ARI) and referral of severe cases</li> <li><b>Pregnant women</b> : systematic treatment with Fansidar, Iron/folate, Albendazole, referral to ANC and institutional delivery, referral when risks and danger signs</li> <li><b>MUAC</b> : passive screening →referral of red &amp;orange passive</li> <li><b>Referral of complicated cases by motorbike taxis</b></li> </ul> </li> </ul>
	September	<ul style="list-style-type: none"> <li>CHW/TBA in Behili and Mbarara camps functional. No direct MSF supervision possible → CHW come biweekly to MSF for reporting &amp;</li> </ul>

Year	Month	Activities/events
		supply;
	Week 35 – week 48	<ul style="list-style-type: none"> <li>• Closure of community treatment points on Behili axe (over consumption of medicines, security problems) → restart with new CHW</li> </ul>
		<ul style="list-style-type: none"> <li>• Continuation of mobile clinics when possible</li> </ul>
	End 2017	<ul style="list-style-type: none"> <li>• Start of CAGs: first groups on Gbazara and Farazala roads</li> </ul>
<b>2018</b>	January	<ul style="list-style-type: none"> <li>• Target group reduced to &lt; 5 years and pregnant and lactating women</li> <li>• Opening of new maternity waiting home in Kabo HC</li> </ul>
		<ul style="list-style-type: none"> <li>• Continuation of mobile clinics</li> </ul>
	July – November 12	<ul style="list-style-type: none"> <li>• Support of Farazala HP during malaria peak <ul style="list-style-type: none"> <li>○ Target group: &lt;5-years and pregnant women</li> <li>○ Free consultation for target group</li> <li>○ Drugs for malaria, diarrhoea and ARI for target groups</li> </ul> </li> </ul>
	July and November	<ul style="list-style-type: none"> <li>• Recruitment of 3 mobile health promoters to complement the work of CHW/TBA (Farazala &amp; Moyen Sido in July, Gbazara in November)</li> </ul>
	Mid-July – end August	<ul style="list-style-type: none"> <li>• Insecurity : reduction of activities during 6 weeks, affected also supervision of CHW</li> </ul>
		<ul style="list-style-type: none"> <li>• Expansion of CAGs</li> </ul>
<b>2019</b>	May	<ul style="list-style-type: none"> <li>• Postnatal check-up by trained TBA added in Gbazara axe</li> </ul>
	July	<ul style="list-style-type: none"> <li>• Increase of target groups to &lt; 15 years and pregnant ad lactating women during the malaria peak</li> </ul>
		<ul style="list-style-type: none"> <li>• Reopening of Behili axe for MSF movements <ul style="list-style-type: none"> <li>○ 3 outreach/mobile clinics between July and September</li> <li>○ Recruitment of 3 CHW /TBA tandems for 3 additional sites</li> <li>○ Training of new CHW/TBA</li> </ul> </li> </ul>
	September	<ul style="list-style-type: none"> <li>• New CHW working on Behili axe <ul style="list-style-type: none"> <li>○ Monthly supervision foreseen for Behili</li> <li>○ Biweekly meeting with CHW at MSF base in Kabo</li> </ul> </li> <li>• Training of TBA of remaining roads on postnatal check-ups</li> <li>• Intensified frequency of mobile clinics to improve vaccination coverage</li> </ul>

## 6.6 List of interviewees

<b>MSF OCBA Headquarters</b>	<b>Position</b>
DMC advisor since 2018	
Medical director, former programme manager Cell 2	
E-health officer	
Health advisor, Cell 3, CAR, since 2012	
Deputy programme manager, Cell 3, since April 2018	
Former health advisor, Cell 3, from September 2017 - October 2018	
Humanitarian anthropology, community engagement and health promotion advisor since April 2019	
Humanitarian anthropology, community engagement and health promotion advisor for West Africa	
<b>MSF OCBA Headquarter – former staff</b>	
Programme manager, Cell 3, 2017	
Deputy programme manager, Cell 3, September 2016 - February 2018	
Humanitarian anthropology, community engagement and health promotion advisor	
Programme manager, Cell 3, September – February 2017	
<b>MSF OCBA Central African Republic - capital</b>	
Head of mission since August 2019	
Medical coordinator, OCBA, since Sept 19 Deputy medical coordinator, OCBA	
Deputy HoM OCBA	
Health promotion officer Tongolo project, Bangui	
<b>MSF Central African Republic - intersectional or other operational centres</b>	
MSF CAR intersectional special advisor	
Deputy medical coordinator, OCA	
<b>MSF OCBA Central African Republic capital - former staff</b>	
Medical coordinator, CAR, 2017	
Head of mission, CAR, Feb 2016-April 2017	

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### **MSF OCBA Kabo project**

Field coordinator, Kabo

Project medical referent Medical activity manager

Nurse activity manager, periphery Field coordinator assistant Health promotion supervisor Nurse supervisor, periphery

4 men, 1 woman

Health promoter, Gbazara road Health promoter, Moyen Sido Health promoter, Farazala road

### **MSF OCBA Kabo – former staff**

Field coordinator, March 2017 – September 2017

Field coordinator, Kabo , October 2018 –December 2018

Field coordinator, July 2016 - March 2017

Field coordinator, June 2019- Sept 2019, Logistical coordinator, December 2018 - May 2019

### **MSF OCBA Batangafo project**

Field coordinator, March 2019-September 2019

### **Health Facility Staff**

Health assistant in charge of Moyen Sido Health post

Head of Kabo health centre

Midwife CPN, Kabo health centre

Nurse, emergency room, Kabo health centre

Nurse in charge, neonatology unit, Kabo health centre

Nurse aid, paediatric ward, Kabo health centre

Midwife, Kabo health centre

Nurse, emergency room, Kabo health centre Nurse in charge of TB/HIV, Kabo health centre

HIV/TB counsellor, Kabo health centre

### **Community health workers/ trained traditional birth attendants**

CHW Bokayanga, TBA Bokayanga

CHW Kakobo, TBA Kakobo

CHW Beltonou I, TBA Beltonou I

6 male CHW

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## Patients and Community

<b>Focus Group Men Moyen Sido</b>	8 community leaders
<b>Focus Group Women Moyen Sido</b>	8 women (2 pregnant) 1 president of women association
<b>Focus Group Women Kakobo</b>	12 women (4 pregnant)
<b>Focus Group Men Kakobo</b>	8 community leaders, 1 community member
<b>Focus Group Women Beltounou 1</b>	2 TBA, 9 beneficiaries (4 pregnant)
<b>Focus Group Women Bokayanga</b>	15 women, 22–55-years-old, leaders and beneficiaries
<b>Focus group Men Bokayanga</b>	15 leaders +1 leader from nearby Mbarara camp
<b>Focus Group Men Beltounu 1</b>	17 male community members
<b>Focus Group Health Post Farazalah</b>	4 Health workers and 7 members of COGES
<b>Focus Group with CAG members</b>	4 women, 4 men, 3 CAGs of Kabo, 4 of roads
<b>Female Patient 1</b>	Postnatal care patient
<b>Female Patient 2</b>	ANC patient
<b>Individual interviews Emergency Room</b>	2 women, 1 pregnant, 1 mother of 2 sick children
<b>Focus group Maternity Waiting Home</b>	9 patients and 8 care takers
<b>Individual Interview patients referred from the roads</b>	3 women (with baby) in emergency room, 2 caretakers of children in paediatric ward, 2 women maternity Teacher, interpreter

## External stakeholders

Head of primary healthcare, MoH

Chef de Section Sante, UNICEF

Health Programme Coordinator MENTOR Anthropologist, did 2 studies for MSF OCBA in CAR

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## 6.7 Tables

**Table 6: Community referrals arrived at health facility 2017 – 2019, MSF Kabo project**

	2017 (Week 16 -52)		2018 (Week 1 - 52)		2019 (Week 1 - 28)	
	n	%	n	%	n	%
Referral by foot	883		1119		814	
Referral by foot arrived	326	36.9	629	56.2	533	65.5
Referral by moto	395		472		382	
Referral by moto arrived	341	86.3	389	82.4	381	99.7
Total referral	1278		1591		1196	
Total referral arrived	667	52.2	1018	64.0	914	76.4

**Table 7: Total number of consultations at community treatment points, week 16 2017 - week 28 2019, MSF Kabo project**

	2017 (Week 16 - 52)	2018 (Week 1- 52)	2019 (Week 1-28)	Total
Total visits	29,113	31,870	9,503	<b>70,486</b>
Malaria test done	27,634	30,805	8,954	67,393
Malaria test +	24,252	26,234	7,515	58,001
Simple malaria cases	23,894	25,810	7,439	57,143
Severe malaria cases	201	201	71	473
Diarrhoea cases	1,092	2,386	764	4,242
Respiratory tract infections	261	1,325	529	2,115
Danger signs	364	342	212	918

**Table 8: Total number of consultations for pregnant or lactating women at community treatment points**

	2017 (Week 16 - 52)	2018 (Week 1- 52)	2019 (Week 1-28)	Total
Total visits	2,191	3,832	1,488	<b>7,511</b>
Malaria test done	1,887	3,584	1,265	6,736
Malaria test +	1,157	2,667	886	4,710
Simple malaria cases	1,120	2,565	882	4,567
Prevention with Fansidar	489	725	255	1,469
Prevention with Albendazole	1,061	1,360	490	2,911
Prevention with Iron	1,522	2,778	1,111	5,411
Danger signs	162	251	155	568
Referrals for danger signs	156	231	135	522
Referral by foot	294	366	169	829
Referral to maternity waiting home	64	127	168	359

**Table 9: Number of consultations at community treatment points by age groups, week 16 2017 - week 28 2019, MSF Kabo project**

Community Health Workers	2017 (Week 16 -Week 52)					2018 (Week 1 - Week 52)					2019 (Week 1 - Week 28)				
	2- 11 months	12-59 months	5-15 years	> 15 years	TOTAL	2- 11 months	12-59 months	5-15 years	> 15 years	TOTAL	2- 11 months	12-59 months	5-15 years	> 15 years	TOTAL
Total visits	3517	10172	10769	4655	29113	7687	24086	0	0	31870	2245	6843	0	0	9503
Malaria test done	3270	9848	10300	4216	27634	7320	23422	0	0	30805	2045	6487	0	0	8954
Malaria test +	2703	9090	9028	3431	24252	5921	20267	0	0	26234	1518	5679	0	0	7515
Simple malaria cases	2627	8948	8908	3411	23894	5793	19971	0	0	25810	1544	5627	0	0	7439
Severe malaria cases	60	106	19	16	201	71	130	0	0	201	30	41	0	0	71
Diarrhea cases	246	459	274	113	1092	813	1583	0	0	2386	246	503	0	0	764
Respiratory tract infections	67	76	80	38	261	486	839	0	0	1325	217	312	0	0	529
Danger signs	101	149	56	58	364	125	217	0	0	342	84	128	0	0	212
Referral by moto	97	144	45	54	340	90	159	0	0	249	58	80	0	0	138
Referral by foot	224	272	188	230	914	289	395	0	0	698	221	374	0	0	595
<b>Traditional Birth Attendants</b>	<b>&lt; 15 years</b>		<b>&gt;15 years</b>	<b>TOTAL</b>		<b>&lt; 15 years</b>		<b>&gt;15 years</b>	<b>TOTAL</b>		<b>&lt; 15 years</b>		<b>&gt;15 years</b>	<b>TOTAL</b>	
Total visits	20		2171	2191		118		3709	3832		44		1444	1488	
Malaria test done	12		1875	1887		102		3477	3584		43		1222	1265	
Malaria test +	2		1155	1157		82		2583	2667		42		844	886	
Simple malaria cases	2		1118	1120		81		2482	2565		41		841	882	
Prevention with Fansidar	4		485	489		23		702	725		0		255	255	
Prevention with Albendazole	11		1050	1061		64		1296	1360		15		475	490	
Prevention with iron	9		1513	1522		97		2678	2778		45		1066	1111	
Danger signs	2		160	162		11		240	251		2		153	155	
Referral for danger signs	2		154	156		11		220	231		2		133	135	
Referral by foot	6		288	294		16		350	366		4		165	169	
Referral at maternity waiting home	4		60	64		2		125	127		1		167	168	

**Table 10: All diseases – Kabo HC, Moyen Sido HP – 2016 - 2019 (Jan to Sept)**

Periods	2016				2017				2018				2019			
	n	%	IC95 inf	IC95 sup	n	%	IC95 inf	IC95 sup	n	%	IC95 inf	IC95 sup	n	%	IC95 inf	IC95 sup
<b>All age groups</b>																
OPD	69937				74940				75103				87037			
IPD admissions	4165				3961				4107				4353			
IPD exits	4166				3928				3876				4269			
Hospital mortality	129	3,1	2,6	3,6	105	2,7	2,2	3,2	89	2,3	1,8	2,8	94	2,2	1,8	2,6
Early (<48 h) hospital mortality (/1000)	28	0,7	0,5	0,9	26	0,7	0,4	1	24	0,6	0,4	0,8	27	0,6	0,4	0,8
<b>&lt; 5 y</b>																
OPD	24492				26329				27020				30810			
IPD admissions	1365				1265				1247				1482			
IPD exits	1524				1366				1353				1309			
Hospital mortality	70	4,6	3,5	5,7	41	3	2,1	3,9	36	2,7	1,8	3,6	27	2,1	1,4	2,9
Early (<48 h) hospital mortality (/1000)	18	1,2	0,7	1,7	9	0,7	0,3	1,1	5	0,4	0,1	0,7	7	0,5	0,1	0,9
<b>5 - 14 y</b>																
OPD	13128				12953				14395				15647			
IPD admissions	518				167				210				238			
IPD exits	451				130				178				204			
Hospital mortality	13	2,9	1,4	4,4	5	3,8	0,3	7,1	7	3,9	1,0	6,8	10	4,9	1,9	7,9
Early (<48 h) hospital mortality (/1000)	4	0,9	0	1,8	1	0,8	0	2,3	2	1,1	0,0	2,6	5	2,5	0,4	4,6
<b>&gt;= 15 y</b>																
OPD	32317				35658				33688				40580			
IPD admissions	2282				2529				2650				2633			
IPD exits	2191				2432				2345				2756			
Hospital mortality	46	2,1	1,5	2,7	59	2,4	1,8	3	46	2	1,4	2,6	57	2,1	1,6	2,6
Early (<48 h) hospital mortality (/1000)	6	0,3	0,1	0,5	16	0,7	0,4	1	17	0,7	0,4	1	15	0,5	0,2	0,8

**Table 11: Malaria – Kabo HC, Sido – 2016 - 2019 (Jan. - Sept)**

Periods	2016				2017				2018				2019			
	n	%	IC95 inf	IC95 sup	n	%	IC95 inf	IC95 sup	n	%	IC95 inf	IC95 sup	n	%	IC95 inf	IC95 sup
<i>All age groups</i>																
Total	29823	na			34702	na			43201	na			40537	na		
OPD	28814	96,6			33724	97,2			41930	97,1			39332	97,0		
IPD	1009	3,4			978	2,8			1271	2,9			1205	3,0		
Case Fatality Ratio	23	2,3	1,4	3,2	15	1,5	0,8	2,3	4	0,3	0,0	0,6	9	0,7	0,3	1,2
<i>&lt; 5 y</i>																
Total	14467	na			15821	na			18974	na			20468	na		
OPD	13645	94,3			15011	94,9			18131	95,6			19521	95,4		
IPD	822	5,7			810	5,1			843	4,4			947	4,6		
Case Fatality Ratio	20	2,4	1,4	3,5	9	1,1	0,4	1,8	2	0,2	0,0	0,6	5	0,5	0,1	1,0
<i>5 - 14 y</i>																
Total	6876	na			8373	na			10436	na			10741	na		
OPD	6752	98,2			8287	99,0			10328	99,0			10608	98,8		
IPD	124	1,8			86	1,0			108	1,0			133	1,2		
Case Fatality Ratio	3	2,4	0,0	5,1	4	4,7	1,0	9,1	0	0,0	0,0	0,0	0	0,0	0,0	0,0
<i>&gt;= 15 y</i>																
Total	8480	na			10508	na			13791	na			9328	na		
OPD	8417	99,3			10426	99,2			13471	97,7			9203	98,7		
IPD	63	0,7			82	0,8			320	2,3			125	1,3		
Case Fatality Ratio	0	0,0	0,0	0,0	2	2,4	0,0	5,8	2	0,6	0,0	1,5	4	3,2	0,1	6,3

**Table 12: Acute non-bloody diarrhoea in OPD and IPD – Kabo HC, Moyen Sido HP – 2016 - 2019 (Jan-Sept)**

Periods	2016				2017				2018				2019			
	n	%	IC95 inf	IC95 sup	n	%	IC95 inf	IC95 sup	n	%	IC95 inf	IC95 sup	n	%	IC95 inf	IC95 sup
<i>All age groups</i>																
OPD	1518	na			1456	na			1221	na			1844	na		
IPD	134	8,1	6,8	9,4	87	5,6	4,5	6,8	85	6,5	5,2	7,8	46	2,4	6,8	9,4
<i>&lt; 5 y</i>																
OPD	1191	na			1003	na			899	na			1332	na		
IPD	66	5,3	4,0	6,5	60	6,0	4,6	7,4	58	6,5	4,9	8,0	32	2,4	1,6	3,2
<i>5 - 14 y</i>																
OPD	127	na			123	na			74	na			107	na		
IPD	11	8,0	3,5	12,5	2	1,6	0,0	3,8	1	1,4	0,0	4,0	0	0,0	0,0	0,0
<i>&gt;= 15 y</i>																
OPD	200	na			330	na			248	na			405	na		
IPD	57	22,2	17,1	27,3	25	7,0	4,4	9,7	26	9,5	6,0	13,0	14	3,5	1,7	5,2

**Table 13: Bloody diarrhoea in OPD and IPD – Kabo HC, Moyen Sido – 2016 - 2019 (Jan-Sept)**

Periods	2016				2017				2018				2019			
	n	%	IC95 inf	IC95 sup	n	%	IC95 inf	IC95 sup	n	%	IC95 inf	IC95 sup	n	%	IC95 inf	IC95 sup
<i>All age groups</i>																
OPD	844	na			903	na			602	na			789	na		
IPD	76	8,3	6,5	10,0	17	1,8	1,0	2,7	13	2,1	1,0	3,3	11	1,4	0,6	2,2
<i>&lt; 5 y</i>																
OPD	172	na			203	na			170	na			214	na		
IPD	31	15,3	10,3	20,2	7	3,4	1,0	5,9	1	0,6	0,0	1,7	2	0,9	0,0	2,2
<i>5 - 14 y</i>																
OPD	191	na			73	na			62	na			105	na		
IPD	13	6,4	3,0	9,7	0	0,0	0,0	0,0	0	0,0	0,0	0,0	0	0,0	0,0	0,0
<i>&gt;= 15 y</i>																
OPD	481	na			627	na			370	na			470	na		
IPD	32	6,2	4,1	8,3	10	1,6	0,6	2,5	12	3,1	1,4	4,9	9	1,9	0,7	3,1

**Table 14: Crude mortality rate (deaths per 10,000 /day) by road and year, periphery MSF Kabo project, 2017-2019**

Year	Gbazara			Farazala			M. Sido			Nomade			Behili			All roads		
	CMR	CI 95%		CMR	CI 95%		CMR	CI 95%		CMR	CI 95%		CMR	CI 95%		CMR	CI 95%	
2017	0,12	0,07	0,18	0,17	0,11	0,24	0,08	0,03	0,18	0,03	0,00	0,19	0,02	0,00	0,09	0,11	0,08	0,14
2018	0,09	0,06	0,14	0,06	0,04	0,10	0,16	0,09	0,26	0,10	0,03	0,25	0,04	0,01	0,11	0,09	0,06	0,11
2019	0,12	0,07	0,19	0,06	0,03	0,12	0,04	0,01	0,14	0,00	0,00	0,17	0,00	0,00	0,08	0,07	0,04	0,10

**Table 15: U5 mortality rate (deaths per 10,000 /day) by road and year, periphery MSF Kabo project, 2017-2019**

Year	Gbazara			Farazala			M. Sido			Nomade			Behili			All roads		
	U5MR	CI 95%		U5MR	CI 95%		U5MR	CI 95%		U5MR	CI 95%		U5MR	CI 95%		U5MR	CI 95%	
2017	0,38	0,16	0,70	0,61	0,35	0,99	0,19	0,02	0,70	0,00	0,00	0,80	0,00	0,00	0,37	0,36	0,24	0,52
2018	0,24	0,11	0,45	0,16	0,06	0,35	0,47	0,19	0,96	0,45	0,09	1,32	0,21	0,04	0,50	0,25	0,17	0,36
2019	0,29	0,11	0,64	0,20	0,05	0,50	0,00	0,00	0,46	0,00	0,00	1,03	0,00	0,00	0,48	0,17	0,08	0,31

**Table 16: Active patients on ARV treatment, CAG and individual follow-up September 2019, MSF Kabo project**

	Numbers	Percent
Total patients on ART	245	
Patients in CAG	126	51
Patients in individual follow-up	119	49

**Table 17: Women admitted to maternity waiting home and the provider who referred, Kabo HC, January to September 2019, MSF Kabo project**

Month	Number	Referred by			
		CPN	ASC	Outreach	No information
January	21	3	13	5	
February	31	0	22	9	
March	27	5	13	3	
April	21	8	13		
May	33	4	29		
June	24	4	20		
July	32	3	29		
August	24	4	20		
September	21	8	13		
<b>Total</b>	<b>234</b>	39	172	17	6
<b>Percent</b>		<b>16.7</b>	<b>73.5</b>	<b>7.3</b>	<b>2.6</b>

**Table 18: Origin by road – women admitted in maternity waiting home, Kabo HC, January to September 2019**

Road	Number of women	Percent
Gbazara	97	41.5
Farazala	93	39.7
M Sido	41	17.5
Behili	2	0.9
Other	1	0.4
<b>Total</b>	<b>234</b>	

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