



Community Health Volunteer Mobility:

Expanding the reach of community health volunteers through the provision of bicycles



Madagascar Community-Based Integrated Health Program (CBIHP), locally known as MAHEFA, was a five-year (2011-2016), USAID-funded community health program that took place across six remote regions in north and north-west Madagascar (Menabe, SAVA, DIANA, Sofia, Melaky, and Boeny). The program was implemented by JSI Research & Training Institute, Inc. (JSI), with sub-recipients Transaid and The Manoff Group, and was carried out in close collaboration with the Ministry of Public Health, the Ministry of Water, Sanitation and Hygiene, and the Ministry of Youth and Sport. Over the course of the program, a total of 6,052 community health volunteers (CHVs) were trained, equipped, and supervised to provide basic health services in the areas of maternal, newborn, and child health; family planning and reproductive health, including sexually transmitted infections; water, sanitation, and hygiene; nutrition; and malaria treatment and prevention at the community level. The CHVs were selected by their own communities, supervised by heads of basic health centers, and provided services based on their scope of work as outlined in the National Community Health Policy. Their work and the work of other community actors involved with the MAHEFA program was entirely on a voluntary basis.

This brief is included in a series of fifteen MAHEFA technical briefs that share and highlight selected strategic approaches, innovations, results, and lessons learned from the program. Technical brief topics include *Behavior Change Empowerment, Community Radio Listening Groups, Community Score Card Approach, Chlorhexidine 7.1%/ Misoprostol, Champion Communes Approach, Community Health Volunteer Mobility, Emergency Transport Systems, Malaria, Community Health Volunteer Motivation, Family Planning & Youth, WASH, eBox, Community Health Financing Scheme, Information Systems for Community Health and NGO Capacity Building.*

Background

Community health volunteers (CHVs) play a critical role in Madagascar by providing basic community based health services, particularly for women and children. MAHEFA builds the capacity of this important cadre to carry out program activities including antenatal care (ANC), newborn and child health including nutrition and vaccination, family planning (FP), reproductive health (RH), and WASH services in health huts and during home visits. CHVs who reside in rural areas must often travel long distances to conduct health activities and provide services to the families who rely on them. CHVs often expend personal financial resources and significant amounts of time on these travels. The considerable time and financial burden on CHVs limits the quality of services that CHVs are able to provide including time spent with clients, routine resupply of medications and equipment, meeting attendance, and timely report submission.

While transport has been widely recognized as a barrier to the provision of and access to health services in rural areas, few community health programs have addressed CHVs' mobility and integrated transport interventions as an enabler to support the provision of services. From its onset, MAHEFA's core strategy included the trial of innovative solutions to improve CHV mobility, emergency transport systems and transport-related microenterprise activities (eBox). This technical brief addresses CHV mobility; emergency transport systems and eBoxes are addressed in separate MAHEFA technical briefs.

MAHEFA Context

The lack of adequate and efficient transport for CHVs operating in rural Madagascar is one of the primary challenges to the provision of community health services. MAHEFA's formative research on CHVs mobility conducted in 2012¹ revealed that while different types of public transport exist, they are often insufficient, unreliable, and/or expensive. Difficult terrain, that is often mountainous, sandy, and or non-accessible during the rainy season, introduces an added challenge. Almost half of the *communes*, or the smallest territorial division as defined for administrative purposes, in MAHEFA program areas are inaccessible by car or truck for at least four months of the year and 20 percent are inaccessible for almost half the year, placing the population at considerable risk and requiring creative approaches to address basic health needs and emergencies.

CHVs in the MAHEFA program are stationed at the *fokontany* level (*fokontany* is defined as a collection of villages). CHVs are supervised by staff at the *Centre de Santé de Base* (CSB) and are required to travel from their health post to the CSB at least once a month to meet with other CHVs from surrounding areas, to report their respective *fokontany's* health statistics and to re-supply health products. The distance from a CHV's health post to the CSB ranges from 5km to 45km. In addition to the trips made to the CSB, CHVs regularly walk long distances to conduct home visits and education sessions for households in their *fokontany*. MAHEFA program records show that on average, a CHV makes seven home visits per month and the distance from

1. MAHEFA program, 2012. Study on Community Health Volunteer Mobility



their health post to the furthest household in their *fokontany* ranges from 5km to 25km. CHVs travel these long distances often alone, by foot and without any travel allowance.

The MAHEFA Approach

The MAHEFA program tackled CHV mobility challenges by providing bicycles to ensure that CHVs have access to a means of transport that is available, functional, and effective. MAHEFA's hypothesis was that by reducing the time and cost of travel, CHVs would be motivated to improve the quality of their services. For the purpose of CHV mobility activities, MAHEFA defines CHV quality of services by: 1) time spent with clients during home visits, 2) frequency of resupply of health products, 3) attendance at the CSB monthly meetings, and 4) report submission rate. The key activities for MAHEFA's CHV mobility approach are described below.

Key Activities

1. Ensured procurement of quality bicycles.

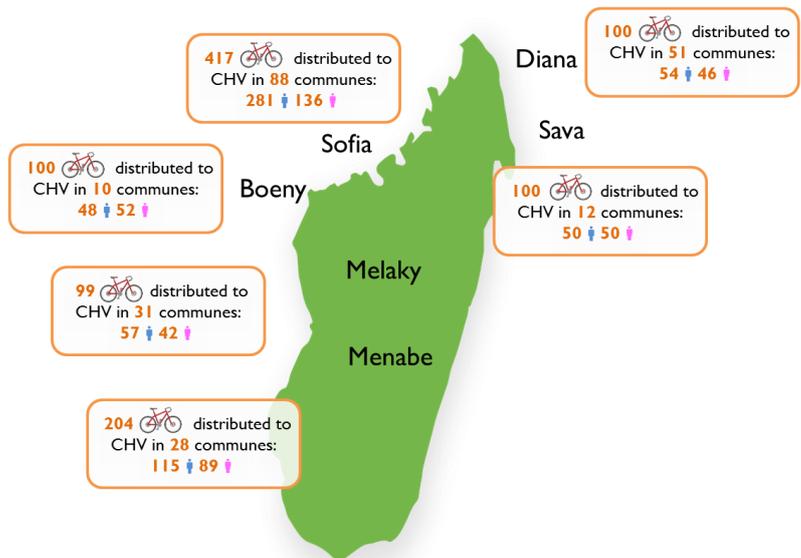
MAHEFA collected information on ideal bicycle specifications for use in its program areas in rural Madagascar, including an assessment of bicycles that some CHVs had received from the National Strategy Application (NSA) project². The information taken into consideration included the following: terrain, patterns of CHV work and travel, average distances, types of road (paved or unpaved), and level of experience and comfort riding a bicycle. CHV bicycle procurement was undertaken in three waves; 20 bicycles in 2013, 300 in 2014 and 700 in 2015. The phased approach allowed MAHEFA to procure more appropriate bicycles as its understanding of the above-mentioned conditions improved.

2. Developed CHV selection criteria, training curricula and materials.

Program resources were not sufficient to provide bicycles to all CHVs, therefore clear criteria for selection of CHVs who would receive bicycles had to be developed. The eligibility criteria was jointly prepared by MAHEFA and the NGO partner teams. Fully functional CHVs³ with high performance records were given priority to further incentivize performance. Additional criteria of eligibility included: CHVs who had not received bicycles from other projects, CHVs whose health huts were in locations appropriate for bicycle use and that maintained good access in all seasons, and CHVs in more

remote locations. Since there were no pre-existing materials adapted for training CHVs on bicycle management, maintenance, and repair in Madagascar, the program developed a training curriculum and a simple image guide to help CHVs maintain and repair their bicycles. Additionally, a bicycle maintenance kit and mobility register were distributed to each CHV, to help monitor bicycle use and expenses associated with repairs. All materials were produced in Malagasy to facilitate use by CHVs and local NGOs.

Figure 1. CHV mobility in the MAHEFA program by region



3. Conducted training on bicycle assembly, safe riding, maintenance and repair. During the three-day training, CHVs learned to assemble⁴, maintain and repair their own bicycle, as well as safe riding techniques, rules and regulations of bicycle use. During the training, CHVs signed a letter stating that if a CHV leaves the program s/he is obligated to return the bicycle. However, it is MAHEFA's vision that once the program activities end, the bicycle will belong to the CHVs who remained with the program until this time.

4. Provided supportive supervision to ensure CHVs managed bicycles and made necessary bicycle maintenance and repairs. The MAHEFA team conducted monthly supportive supervision visits to monitor CHV skills in using and maintaining their bicycle.

5. Monitored and documented CHV mobility activities. In addition to the needs assessment survey to identify ideal bicy-

2. During the same period, the NSA program provided bicycles to some CHVs in MAHEFA areas.

3. Fully functional CHVs are those who completed five training courses and one practicum and who began to provide integrated health services (maternal, newborn and child health, family planning, prevention and promotion of key health messages including water, sanitation and hygiene).

4. Bicycles were semi-assembled when they arrived at the program sites. The first part of the CHV training is to assemble the bicycles.



cle specifications, MAHEFA recorded data on CHV mobility activities including resupply of health products, monthly meeting attendance at the CSB, routine home visits, and education activities in its routine monitoring and evaluation (M&E) system. In August 2015, a qualitative review of MAHEFA's CHV mobility activities was conducted.

Results

Since 2012, MAHEFA has provided bicycles to 1,020 CHVs in 220 *communes* (17 percent of CHVs in 79 percent of all program region *communes*). All CHVs who received bicycles also received training in the safe riding, management, maintenance, and repair of bicycles.

In terms of impact on CHV operations, it is not possible to attribute higher results from CHVs with bicycles solely to the bicycle, since only high-performing CHVs were selected to receive the bicycles. However, the following findings demonstrate that CHVs with bicycles continued to perform better than the average CHVs in regards to avoiding stock outs of medications and conducting more home visits, while a very slight decrease was noted in monthly meeting attendance.

Additional qualitative interviews with 62 CHVs between September and December 2015 in the regions of Menabe, Sofia and SAVA showed that bicycles assisted CHVs in performing the following health activities: household visits, resupplying health products, mobilization for vaccination campaigns, accompanying referred patients to the CSB, participation in the monthly meeting, and reporting. CHVs with bicycles reported that they visit more families (an average of 8 home visits per month) and in some cases are able to reach more remote communities. Some CHVs in areas that commonly experience attacks from organized groups of cattle thieves reported that they feel safer, as they can travel to those areas and return before dark, thereby avoiding potential attacks.

Many CHVs interviewed said that they appreciated the robustness of MAHEFA bicycles, the availability of spare parts, and the provision of tools that allowed CHVs to carry out basic maintenance and repairs. They also stated that they felt confident in carrying out basic repairs and maintenance, and that they made efforts to do safety checks regularly, thanks to the training.

Some CHVs reported that their cost of transport had declined significantly since they received the bicycle, whereas previously they would have hired an ox cart or paid for a minibus taxi. A group of CHVs in the Sofia region said that although they may travel longer distances, they are able to do so in a shorter amount of time. As a result, they are less tired at the end of the day.

The review also found a link between the social status of CHVs and the possession of a bicycle. One CHV in SAVA region observed that CHVs with bicycles seemed to receive higher levels of respect due to owning the bicycle. CHVs in Menabe stated that women in their community perceived the services offered by CHVs who arrived at their homes on bicycles were of higher value.



CHV bicycle training and distribution in Sofia region

Both the program records and the qualitative interview results show that bicycles enabled CHVs to reduce travel time and perform more health activities. Additionally, CHV motivation increased as bicycles were perceived to raise CHVs' status and credibility among community members.

Challenges

Timing of the introduction of transport activities. It was challenging for CHVs to balance their time when a non-core activity such as MAHEFA's transport activities was introduced during the same year as core activity such as pre-service trainings on their technical areas of service. It is crucial for CHVs to first attend these pre-service trainings, and then return to their communities to start service delivery, promote their services and establish themselves as CHVs before participating in the transport activities.



Lack of available, low cost and high-quality bicycles in Madagascar. For a large procurement, it was challenging to find a local supplier who could ensure the quantity and quality of bicycles assembled by hand. Therefore, with the last procurement of bicycles, MAHEFA chose an international supplier. Although this was the preferred option, as it addressed the issue with procurement, it should be noted that using an international supplier increased costs and lengthened the production and shipping process. Additionally, it delayed the distribution of bicycles and the training for CHVs.

Complex repairs remain a challenge. While CHVs are able to do simple repairs, in some cases, complex repairs remained a challenge and a mechanic was needed. In other instances, when CHVs needed to make more complicated repairs to their bicycles, they usually knew how to make the repair, but often lacked access to the spare parts. Many CHVs reported that when they had funds later in the month they were able to purchase the spare parts they needed.

Impact of bicycles on CHV program quality unknown. At the end of the MAHEFA program, data from the program's M&E system allowed only partial analysis of the impact of the CHV mobility activities on their service quality. At the same time that they received bicycles, CHVs also received multiple support mechanisms in terms of training, materials and supervisions, so it was difficult to isolate one single factor as contributing to improvement of their service quality.

Lessons Learned and Recommendations

Use quality bicycles to increase performance and motivate CHVs. Quality bicycles can improve the mobility, motivation, and even social status of CHVs and should be considered for future community-based health programs where CHVs experience transport challenges.

Introduce the CHV mobility activity one year after CHVs become fully functional. The CHV mobility activity should be introduced in the community health program after CHVs have been fully functional for at least one full year. This timing will facilitate the selection of CHVs who will receive bicycles, allow for better coordination of training on safe riding, maintenance and repair, and improve the program's ability to monitor and document impact on CHV service quality.

Accompany the provision of bicycles with training. Training on safe riding, maintenance and repair of the bicycles and provision of repair kits can prolong the useful life of the bicycle and in some cases improve the safety of the CHVs.

Use local bicycle shops for training and future maintenance where possible. The CHV mobility model should be linked with local bicycle shops for continuous training and sustainability of local maintenance and repair. Using the existing training curricula, CHVs' training on safe riding, maintenance and repair could be done locally by local bicycle shops so that they can provide further assistance to CHVs as needed.

Collect more data on impact of the CHV mobility program on CHV service quality. Further studies should be conducted to determine if the bicycle approach contributes to improvements in key health indicators.

FOR MORE INFORMATION, PLEASE CONTACT:

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