USAID COMMUNITY CAPACITY FOR HEALTH PROGRAM

Promoting Community Leadership for Measurable Progress in the Fight Against Vaccine Preventable Diseases



PROGRAM SUMMARY

he USAID Community Capacity for Health Program—known in Madagascar as Mahefa Miaraka—is a five-year (2016–2021) community-based integrated health program funded by the United States Agency for International Development (USAID). The Program is a collaborative effort among the Ministry of Public Health (MOPH), USAID, and JSI Research & Training Institute, Inc. (JSI). Mahefa Miaraka provides tools and capacity-building training to approximately 10,000 community health volunteers (CHVs) who provide basic maternal health, child health, and family planning services to their local communities. The Program also works with national and local government stakeholders to strengthen the health sector and health policies. Mahefa Miaraka operates in seven regions of Madagascar, covering 4,708 villages with a total population of 6.6 million people, or 28 percent of the country's population.

MAHEFA MIARAKA





COVERING A TOTAL OF 4,708 VILLAGES



WITH A TOTAL POPULATION OF 6.6 MILLION PEOPLE



OR 28 PERCENT OF THE COUNTRY'S TOTAL POPULATION





OVERVIEW

Madagascar has very low immunization coverage, with only 32 percent of children ages 12–23 months having received all their vaccinations, with only 59 percent¹ having received the full three doses of the pentavalent five-in-one vaccine against diphtheria, tetanus, pertussis, hepatitis B, Haemophilus influenzae type b infections (DTP-hepB-Hib), according to the 2018 Multiple Indicator Cluster Survey (MICS). This rate is lower than the Expanded Programme on Immunization's (EPI) standard set by the Global Vaccine Action Plan of 90 percent at the national level and at least 80 percent in each district for all antigens.²

Despite these gaps in population coverage and several logistical, procurement, data, and surveillance challenges, Madagascar declared the elimination of neonatal tetanus in 2014, and in June 2018, the country obtained polio-free status from the World Health Organization (WHO).³, ⁴ Maintaining these gains is a national priority. Numerous challenges persist, making the country vulnerable to the resurgence of vaccine-preventable diseases. For example, in 2018 and 2019, Madagascar experienced a measles outbreak. New polio cases have also been identified, leading the MOPH to plan a polio campaign for June 2021.

As described in Madagascar's Comprehensive Multi-Year EPI Plan (PPAC, Plan Pluriannuel Complet), the national vaccina-

tion policy recommends providing all vaccinations for children before the age of 12 months during five vaccination contact visits. They include the pentavalent (DTP-hepB-Hib) vaccine, and inoculations against tuberculosis, polio, rotavirus, pneumococcus, and measles. In 2018, Madagascar obtained GAVI (the Vaccine Alliance) approval for the introduction of the second dose of the measles vaccine in 2020. In line with WHO recommendations, the vaccine to prevent tetanus and diphtheria (Td) was introduced in 2019 as a replacement for the antitetanus inoculation for pregnant women.

To overcome the challenges, Madagascar initiated a strategy—the Reaching Every Child (REC) approach—based on WHO and UNICEF's Reaching Every District (RED) approach, to strengthen EPI, with the aim of revitalizing routine immunization activities in all districts. The objective of the REC approach is to protect all women and children from vaccine-preventable diseases through sustained increases in immunization coverage.⁵

The MOPH delivers vaccines in Madagascar through several channels, involving routine EPI services at health centers and mobile outreach strategies,⁶ including supplementary immunization activities (SIA), such as immunization campaigns and activities integrated with Mother and Child Health Weeks.

5 Ministère de la Santé Publique (MOPH). (2018). Guide de l'Approche Atteindre Chaque Cible à Madagascar. Antananarivo, Madagascar: MOPH.

I Institut National de la Statistique (INSTAT) and UNICEF. (2019). Enquête par Grappes à Indicateurs Multiples-MICS Madagascar, 2018, Rapport Final. Antananarivo, Madagascar: INSTAT and UNICEF.

² Ibid.

Ministère de la Santé Publique (MOPH). (2018). Plan Pluriannuel Complet, Programme Elargi de Vaccination (PPAC PEV) 2018–2020. Antananarivo, Madagascar: MOPH.
World Health Organization (WHO). Plan Stratégique Régional de l'Eradication de la Poliomyélite, 2014–2020.

⁶ Mobile outreach strategies target hard-to-reach communities that are located more than five kilometers away from a health center or those with other physical or cultural barriers to access.

KEY ACTIVITIES

Support for updating framework documents. The Mahefa Miaraka team provided technical support for updating national EPI standards and procedures. It also assisted in the finalization of the

2018–2020 National Strategic Plan for the Elimination of Measles and Rubella in Madagascar, the National Strategic Plan for Improving EPI Data, and the Guide for the Introduction of the Second Measles Vaccination Dose.



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Support for the implementation of

2018–2020 PPAC initiatives.⁷ Program staff supported data quality audits at regional, district, and commune levels to reinforce the quality of

data and their use to take corrective actions, and the quality of surveillance for the detection and notification of all disease cases that had epidemic potential.



Coordination and collaboration. Mahefa Miaraka staff participated in interagency coordination meetings (Comité de Coordination Inter-Agence) and EPI Directorate planning and problem-solving meetings to troubleshoot common problems, overcome

barriers to achieving REC objectives, and develop EPI microplans at all levels of the health system.



Technical support for regional and district health teams. Program staff participated as trainers and participants in several training of trainer (TOT) programs to provide support for the

development of regional and district microplans. This facilitated the extension of the REC approach and TOTs for regional and district health teams to introduce the second measles vaccination dose. The Program also supported health center directors to provide refresher training to CHVs, along with the provision of EPI job aids used by CHVs for education sessions and for counselling parents of sick children at health huts, called toby. During district-level EPI microplanning, Mahefa Miaraka worked with health centers to organize monthly visits to the same villages for three consecutive months to ensure that infants had the opportunity to receive three doses of the pentavalent (DTP-hepB-Hib) vaccine. CHVs also organized groups of families to join together to attend vaccination clinics as a group and conducted education sessions during market days and in health center waiting rooms during vaccination clinic hours.



Identification of children who were partially vaccinated or unvaccinated. The Program supported CHVs to distribute and review child health cards and to verify that vaccinations were up

to date according to the national vaccine calendar. This included supporting CHV participation in EPI outreach strategies. Through these strategies, health center staff conducted mobile outreach and provided vaccinations in hard-to-reach communities. CHVs also provided care for sick children, nutritional services, and weighed infants and young children at the toby. In addition, CHVs participated in SIA activities, including campaigns and Mother and Child Health Weeks.



Reinforcement of community EPI. Although the CHVs did not directly administer vaccines, they provided ongoing support, in collaboration with health center staff, for EPI outreach services at

the commune and village levels in hard-to-reach areas through home visits. For children under five, this included conducting education sessions, an annual census of each child in the area to update the community EPI register (livre blanc), and verification of child health cards to identify and refer partially unvaccinated or unvaccinated children. For pregnant women, CHV activities included the identification of women who needed to be vaccinated and subsequently referring them to health center personnel for vaccination, using community referral forms, and following up on counter-referral forms received. The Program provided CHVs with refresher training, support for monthly meetings, supervision, and report submission at the health center, with joint supervision from MOPH staff.



Maintaining EPI gains and supporting SIAs. Mahefa Miaraka supported EPI SIAs, including periodic polio vaccination campaigns and the national measles campaign during the 2018-2019

epidemic. This included regular participation in meetings with the Directorate of Health Security, Epidemiological Surveillance, and Response (Direction de la Veille Sanitaire et de la Surveillance Epidémiologique et Riposte) and the preparation of bulletins to share the status of disease surveillance activity indicators and responses for polio, measles, and tetanus.

7 These activities are focused in seven regions out of 22: Analanjirofo, Boeny, Diana, Melaky, Menabe, Sava, and Sofia.

APPROACH

Mahefa Miaraka supported the development of EPI framework documents, including the PPAC, which integrated the new vaccination schedule, the introduction of new vaccines, and the revision of the REC and RED approaches; the establishment of the Global Vaccine Action Plan; vaccination surveillance; and the finalization of the law on vaccination. Program staff routinely joined MOPH teams in carrying out reviews of monthly EPI achievements, supported the monitoring of the EPI Directorate's Annual Activity Plan, and assisted in the development of the EPI standards and procedures manual.

In February 2020, Mahefa Miaraka participated in updating the REC guide. This guide helped strengthen immunization systems by improving planning processes, management of available resources, service delivery, and monitoring, in the context of primary health care services based on community needs. The guide covered:

- Vaccination of all children under 12 months across the country by screening for children who are partially unvaccinated or have not yet been vaccinated.
- Referral of children identified during home visits, monthly child weighing visits, and the promotion of behavior change for parents with children under 12 months (Model and Mentor Families approach).
- Establishing an effective strategy adapted for each commune, and leveraging networks among health centers, Commune Health Development Committees (Commission Communale de Développement de la Santé), and CHVs.

RESULTS

Promoted informed demand for vaccination. CHVs

conducted 541,561 home visits, educating, on average, more than 437,929 people annually on communicable diseases and vaccination in program areas. Mahefa Miaraka broadcast monthly messages on local and regional radio to reinforce the importance of vaccination, reaching more than 1,325,191 people. In addition, the Program provided more than 178,126 Vaccination Diplomas and more than 430,133 health cards for children and mothers in communities and households in the Mahefa Miaraka program areas. Trained 8,712 CHVs in the REC approach and community Vaccine Preventable Disease (VPD) surveillance. Mahefa Miaraka supported the training of CHVs and ongoing monthly community VPD surveillance, which identified 7,304 cases of suspected VPDs at the community level that they reported to health center personnel. This included 4,003 measles cases, 3,106 for acute flaccid paralysis (AFP), and 195 cases of neonatal tetanus. For AFP, the Mahefa Miaraka team supported the CHVs to send stool samples to the Pasteur Institute via health center personnel and to include updates in monthly reporting.

Facilitated CHV support for more than 1,917 advanced strategy outreach sessions to conduct vaccination catchup activities and provide other health services in hard-to-reach communities in line with district health microplanning in the 34 districts of the Mahefa Miaraka program area.

Supported 709 health center heads to guide CHVs during monthly meetings, provided refresher training and job aids, and reviewed community vaccination registers and data as part of an integrated package of health services delivered by CHVs. The majority of CHVs attended these monthly meetings, including during the months following the first detected case of COVID-19.

Participated in 14 regional- and 73 district-level semiannual and quarterly health review meetings, respectively. Mahefa Miaraka worked closely with the MOPH at both levels for activity planning, coordinated implementation, training, increasing the frequency of supervision, and improving the quality of services and reporting.

Undertook measures to protect both beneficiaries and providers from COVID-19 infections at health centers as the regions went into lockdown. Activities included the provision of 355,839 bars of soap, 44,583 washable masks, and 487 megaphones for commune leaders. Mahefa Miaraka developed and implemented a vaccination continuity plan in the context of the COVID-19 pandemic and communication activities adapted to the pandemic context to maintain the population's confidence in the health system.

FOCUS ON: Melaky

At the start of the Mahefa Miaraka Program, the Melaky region had very limited access to vaccines. Melaky is an isolated, insecure, and hard-to-reach region that has significantly limited transport infrastructure. The Program airlifted vaccine supplies to Melaky and implemented dedicated outreach strategies to support the catching up of vaccine coverage. This helped health center staff to then focus on scaling up routine vaccination coverage. From the very low vaccination coverage at program start, coverage in Melaky increased significantly. For example, from 28 percent to 44 percent of children completed the full three doses of the pentavalent (DTP-hepB-Hib) vaccination before their first birthday, according to the mid-term review of the Mahefa Miaraka Program.

Reinforced vaccination service delivery, referrals, and counter-referrals. Figures 1 and 2 show progress in the number of children and pregnant women referred for vaccinations and the coverage rates for key vaccines.

FIGURE I. CHV REFERRALS AND PENTAVALENT (DTP-HEPB-HIB) VACCINATION COVERAGE RATES FOR CHILDREN UNDER THE AGE OF 12 MONTHS IN PROGRAM REGIONS



FIGURE 2. CHV REFERRALS AND TD VACCINATION COVERAGE RATES FOR PREGNANT WOMEN IN PROGRAM REGIONS



Number of pregnant women who received TT2+
Number of pregnant women referred to ANC by CHVs
Percent of women vaccinated

CHALLENGES

As noted in Madagascar's PPAC, improvements in access to vaccination services faced **several challenges:** limited availability of quality vaccines and functional refrigerators in some health centers; insufficient logistics; administrative immunization coverage that differed from WHO and UNICEF estimates; and weak surveillance.⁸

Health center staff had limited resources to track and follow up with families of children who fell behind on their vaccination schedule. Although each health center had files in which child health forms and vaccination registers were stored, personnel in some health centers did not review them to identify children who were lost to follow-up for completion of their vaccinations. In those cases, CHVs may not have received information to reinforce their community census activities to review child health cards at the household level. This could have reduced the identification of children who had not yet completed their vaccinations according to the national schedule or who may not have had any vaccinations. Health personnel were often overwhelmed with duties and were frequently the only staff person at their health center, or the health center may have been understaffed relative to the population in the catchment area.

The vaccine cold chain faced shortages of functional refrigerators due either to insufficient maintenance, lack of wicks, or stockouts of petroleum to power non-solar powered refrigerators. Moreover, management of vaccines in stock may have led to their suboptimal use or wastage in some cases.

Access to many health centers was very challenging,

limiting vaccine resupply efforts and population access to vaccination services. In some cases, health centers were more than 20 kilometers away from resupply points, with limited or no options for motorized or wheeled transport, often for several months of the year. During the rainy season, the population's access to health centers was reduced, with only 25 percent of health centers accessible during the full 12 months of the year.

Insecurity in Melaky and Menabe regions prevented mothers from bringing their children for vaccination visits. In some areas, raids on villages increased insecurity and impeded the functioning of health centers and their ability to conduct outreach sessions, and of CHVs to attend monthly meetings.

⁸ Ministère de la Santé Publique (MOPH). (2018). Plan Pluriannuel Complet, Programme Elargi de Vaccination (PPAC PEV) 2018–2020. Antananarivo, Madagascar: MOPH.

RECOMMENDATIONS



Continue community mobilization and health service delivery through the current cadre of 10,000 CHVs, which includes more than 8,900 CHVs trained to support EPI community education and home visits. These CHVs implement integrated maternal and child health approaches and nutrition services, including vaccination, in Mahefa Miaraka program areas.



Build on Mahefa Miaraka's Melaky region and similar country experiences to identify flexible solutions to overcome vaccine supply stockouts at remote health centers. In Madagascar, the distribution of vaccines follows the national distribution of medicines, with resupply to accessible districts done every three months and every six months to remote districts. Sometimes the MOPH provides additional emergency stocks to health centers; however, in some cases, remote health centers are stocked out of vaccines during the rainy season. To overcome the challenge of maintaining adequate vaccine stocks at health centers, in some regions, it may be possible to establish and maintain larger storage facilities to allow for sufficient vaccine stocks in advance of the rainy season. Intensified vaccination services before and after the rainy season may also help increase community access and despite lengthy weather-related logistics issues.

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Practical solutions that promote coordination between and across administrative boundaries can improve accessibility. In regions like Melaky, where many communes are inaccessible for several months, it may be possible to arrange transportation through the Menabe regional health storage system, for example, which would allow for year-round road access to communes in Melaky.



Support regional and district health staff to further strengthen the analysis of EPI data to identify low-performing health centers and undertake performance improvement activities. Activities could include upgrading CHV and health center REC capabilities; microplanning with districts and health centers to strengthen CHV to health center collaboration for the identification of children who have not received or have missed vaccinations; planning outreach for immunization to underperforming areas; monthly CHV meetings at health centers; integrated review of EPI data at each level; making EPI data management and reporting tools available; and reinforcement of capacity for reporting, investigating, and responding to epidemics.

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