

Madagascar EOP Summary & Results



Geographic Implementation Areas

Regions

- 16/22 (73%)—Alaotra-Mangoro, Amoron'i Mania, Analamanga, Analanjirfo, Atsimo-Andrefana, Atsinanana, Boeny, Diana, Haute Matsiatra, Ihorombe, Melaky, Menabe, Sava, Sofia, Vakinankaratra, and Vatovavy-Fitovinany

Districts

- 80/123 (65%)

Facilities

- 822/1,867 (44%)

Population

Country

- 25.5 million

MCSP-supported areas

- 17.4 million

Technical Areas



Program Dates

July 30, 2014–May 31, 2019

Total Funding through Life of Project

\$11,505,200

Demographic and Health Indicators

Indicator	# or %
Live births/year ¹	796,800
MMR (per 100,000 live births) ²	498
NMR (per 1,000 live births) ²	24
U5MR (per 1,000 live births) ²	72
TFR (births per woman) ²	4.8
ANC +4 ²	49.3%
SBA ²	43.9%
IPTp +2 ²	6.4%

Sources: [1] INSTAT (Institut national de la Statistique, 2015); [2] Madagascar DHS 2008-2009

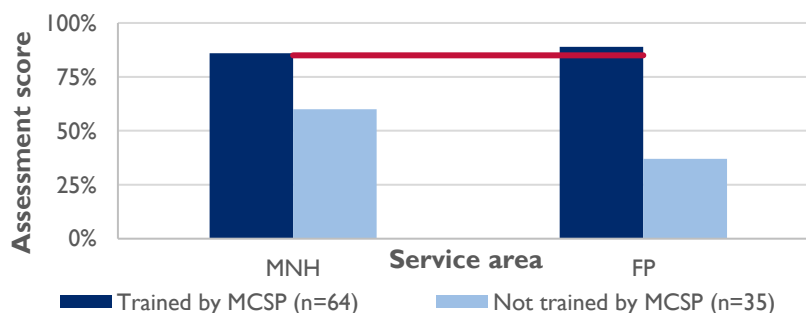
Strategic Objectives through the Life of Project

- Provide national-level support and technical leadership in MNH, immunization, and FP to the Ministry of Public Health.
- Increase access to and improve quality of MNH and immunization services in USG priority regions.
- Increase access to long-acting PFP methods in USG priority regions.
- Improve IPTp in ANC, and improve malaria case management of children and adults at the primary care level.
- Strengthen the capacity of pre-service training institutions to educate midwives according to International Confederation of Midwives standards and competencies.
- Initiate the process to increase the number of doctors who are not surgeons who are able to provide essential surgical services.
- Improve provider capacity to respond to the pneumonic plague outbreak.

Highlights through the Life of Project

- Improved coverage and quality of RMNCAH interventions, contributing to the reduction of institutional MMR from 242 to 20 and a reduction in the fresh stillbirth rate from 16.3 to 8.4 across 513 primary health facilities.
- Institutionalized a competency-based capacity-building approach that reached 1,450 providers using a revised national RMNCAH curriculum with onsite practice, supportive supervision, and mobile mentoring.
- Conducted baseline and endline analyses in 2014 and 2018, respectively, revealing higher levels of MNH and FP knowledge and competencies among MCSP-trained providers and improved facility readiness.
- Helped Madagascar to achieve polio eradication certification in 2018, increased number of immunized children from 60,558 to 72,785, and decreased dropout from 12% in 2015 to 7% in 2018.

Figure 1. Improved MNH and FP knowledge for providers trained by MCSP (providers assessed ≥ 6 months after training)



Madagascar

Background

Madagascar's MMR and neonatal mortality rate are among the highest in the world, with 478 deaths per 100,000 live births and 26 per 1,000 live births, respectively, as of 2013.³⁰ Despite some progress, neonatal mortality contributes to one-third of under-5 child mortality. Many factors contribute to poor maternal and perinatal outcomes, including weak health systems and low coverage and quality of MCH services, including PFP. The 2008–2009 DHS demonstrated that 51% of all non-first pregnancies occurred within a less-than-optimal interpregnancy interval. A baseline health facility assessment conducted by MCSP in 2014 in 15 regions of Madagascar demonstrated widespread gaps in infrastructure; availability of essential drugs; quality of maternal and newborn care; and health worker training, supervision, and use of data. Fifty-six percent of facilities lacked basic supplies and drugs for essential care, and 19% of midwives had not received any recent technical updates in evidence-based MNH best practices in the last 2 years. Only 2% of primary health centers (*centres de santé de base*, the lowest-level health facilities in Madagascar) and 52% of hospitals surveyed were able to provide BEmONC services. Despite introduction of a national PFP action plan in 2015, PFP services were not integrated into MNH services in practice at the start of MCSP's program in Madagascar. In addition, there were no Ministry of Public Health-led national QI RMNCAH strategies or monitoring mechanisms in the country.

MCSP aimed to contribute to reducing maternal and neonatal mortality in Madagascar by promoting a favorable national RMNCAH and immunization policy environment and by strengthening national Ministry of Public Health technical leadership. In total, MCSP strengthened the capacity of over 1,450 providers and improved the readiness of 822 facilities across 16 regions to provide high-quality services, which included the institutionalization of data use for decision-making and QI initiatives at the subnational level of the Ministry of Public Health down to each targeted facility.

Key Accomplishments

Strengthened Ministry of Public Health Technical Capacity to Engender a Favorable National RMNCAH Policy Environment

To foster a favorable environment for the implementation of evidence-based MNH best practices and guide the practice of providers at all levels, MCSP supported updates to several key policies and documents to incorporate global recommendations.

- The development of the 2015–2019 Campaign on Accelerated Reduction of Maternal Mortality in Africa Roadmap, which had previously not been updated since 2006 and provides the overall technical framework for RMNCAH interventions in Madagascar
- Updates to MiP guidelines to align with the WHO recommendations and strengthen the fight against a leading cause of morbidity and mortality
- Updates to the Reproductive Health Norms and Protocols—which guide the practice of all cadres of providers at every level of the health system—to integrate misoprostol, CHX, IPTp, PFP, and adolescent sexual and reproductive health recommendations to support the provision of high-impact, evidence-based interventions
- Technical support to the development, and eventual passing, of an FP/reproductive health law to improve access to FP services, with a focus on youth, which enabled the Ministry of Public Health to develop a National FP Costed Implementation Plan, as well the 2018–2020 Adolescent Sexual and Reproductive Health Strategic Plan and its corresponding budgeted operational plan
- A national EPI strategy and the comprehensive Multiyear Strategic Plan on Immunization, guidelines for national polio and measles campaigns, and support in acquiring the documentation required for Madagascar to obtain its Certification of Polio Eradication

³⁰ United Nations. 2013. *The Millennium Development Goals Report 2013*. New York City: United Nations.

MCSP also supported the Ministry of Public Health to develop capacity-building documents (including a national MNH and FP training curriculum for providers) and implement various training and supervision approaches. These documents formed the framework within which the Ministry of Public Health was able to implement evidence-based best practices to reduce maternal and neonatal morbidity and mortality in Madagascar.

Improved RMNCAH Outcomes through the Institutionalization of QI Initiatives, Including Improved Data Use for Decision-Making

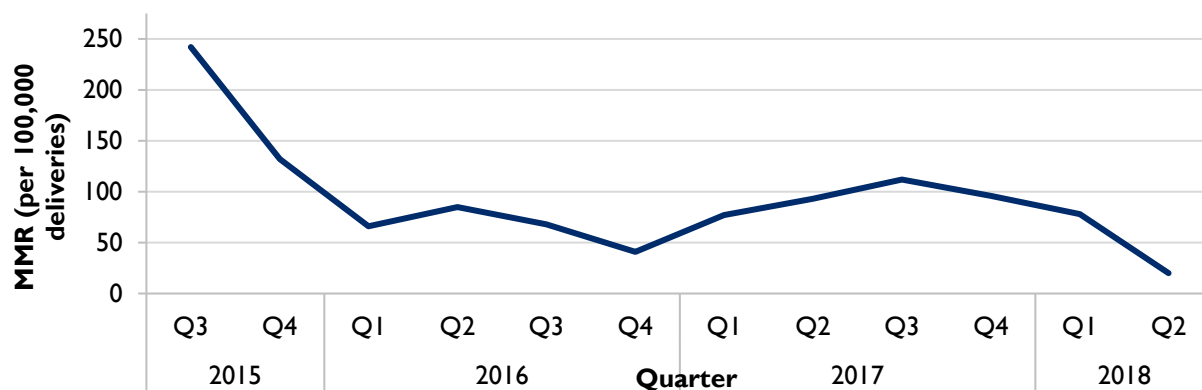
MCSP worked closely with national, regional, and district Ministry of Public Health counterparts and expert clinicians (nurses, midwives, and doctors) to strengthen health worker skills, facility preparedness, organization of MNH services, and use of data for decision-making, progressively scaling up to support 822 facilities (primary health centers and hospitals) in 16 regions. In collaboration with district Ministry of Public Health managers, the program provided additional support to health workers in primary health centers to use a standard MNH and PFP indicator dashboard, and to report results on a monthly basis for aggregation, beginning in 180 primary health centers in four regions in 2014 and scaling up to 513 primary health centers in 16 regions by the end of the program. Tracking with the dashboard involved the use of laminated wall posters by primary health center staff to visualize and interpret their data to guide actions to improve performance on dashboard indicators, and improve the aggregation of results submitted monthly by primary health center staff via SMS on an electronic dashboard platform, which was accessible to district and regional managers.

These QI approaches targeting district and facility Ministry of Public Health staff resulted in improved quality of RMNCAH care to achieve the following measured results across 513 primary health centers between October 2015 to June 2018 and August 2015 to October 2018:

- Women screened for PE/E via routine blood pressure measurement during ANC visits increased from 41% in October 2015 to 96% in June 2018 (n = 1,002,989 total ANC visits in which a woman's blood pressure was measured).
- Women receiving an immediate postpartum uterotonic to reduce PPH increased from 85% in October 2015 to 98% in June 2018 (n = 188,264 total women receiving an immediate postpartum uterotonic).
- Newborns not breathing or crying at birth successfully resuscitated increased from 71% in October 2015 to 90% in June 2018 (n = 13,663 total newborns with asphyxia who were successfully resuscitated).
- The MMR decreased from 242 maternal deaths per 100,000 total deliveries (live and stillborn) to 20 maternal deaths per 100,000 total deliveries from August 2015 to June 2018 (n = 151 total maternal deaths; 183,483 total deliveries, see Figure 2).
- The institutional fresh stillbirth rate decreased from 16.4 fresh stillbirths per 1,000 total births to 8.4 fresh stillbirths per 1,000 total births from August 2015 to June 2018 (n = 183,483 total newborns; 2,035 total fresh stillbirths).

For more information, see the technical brief on [Improving Quality of Maternal and Newborn care and Postpartum Family Planning Services](#).

Figure 2. MMR in primary health centers (n = 183,483 total women delivered and 151 total maternal deaths in 513 primary health centers)



Improved Provider Skills and Knowledge Acquisition and Retention through Human Capacity Development Approaches

As part of its support to the Ministry of Public Health to implement the national Campaign on Accelerated Reduction of Maternal Mortality in Africa Roadmap, MCSP strengthened the capacity of clinical providers at every level of the system to deliver high-quality RMNCAH services. MCSP supported the development of a national MNH curriculum, providing in-service capacity-building, donating MNH and FP equipment and materials, supporting improvements to the PSE environment, and building in-country capacity to sustain interventions.

These activities led to the development of a standardized and comprehensive national MNH curriculum, which included FP, immunization, and MiP for use by all cadres of clinical providers across all levels of the health system. MCSP and the Ministry of Public Health also developed a cascade training system, which included a pool of national trainers who trained 250 regional trainers, who then provided in-service training to clinical providers in 822 facilities across 16 of the country’s 22 regions (65% of all districts), reaching 1,454 providers, or approximately 41% of Madagascar’s providers in the project’s targeted regions. This training approach was supported by efforts to build the capacity of the regional and district health management teams to lead and sustain supervision and mentoring activities. By September 2018, the Ministry of Public Health management teams in eight regions had independently trained over 200 providers, thereby highlighting the successful appropriation of human capacity development skills and their commitment to continuing those activities after the life of the project.

MCSP’s support also contributed to the development of an LDHF capacity-building approach that integrated short, targeted, simulation-based learning activities, which were reinforced with structured, ongoing mentoring and practice sessions at the job site. A 2014 baseline study of 51 facilities and an endline health facility and provider knowledge assessment of 62 facilities in 2018 showed that the average knowledge score among 99 providers trained by MCSP met or surpassed the target of 85% and were on average 26- and 52-percentage points higher for MNH and FP, respectively, compared to providers not trained by MCSP (see Figure 1).

Finally, MCSP provided targeted PSE support to the country’s six public midwifery institutions, including technical updates for 79 teachers, 51 training preceptors, and 17 monitors on the national MNH curriculum, evidence-based MNH standards, and effective teaching skills. MCSP also helped establish four skills laboratories to enable students to master essential skills on anatomic models before their clinical placements. A comparison of two MCSP assessments of students’ skills in two midwifery schools in 2017 and 2018 demonstrated improvements in student competencies across several technical domains, including focused ANC (25-point gain), initial evaluation and partograph use (78-point gain), management of normal childbirth (37-point gain), newborn resuscitation (50-point gain), and management of PPH (43-point gain). (See the technical brief on MCSP’s [human capacity development approach](#) for more information.)

Improved Retention of Skills and Knowledge through Piloted Supportive Supervision Model

From 2016 to 2018, MCSP collaborated with the Ministry of Public Health to pilot a [supportive supervision intervention](#) that added to the Ministry of Public Health's traditional supervision model. The goal was to adapt the model to improve the frequency, availability, and effectiveness of supervision, which was especially important for providers in remote facilities. The standard supportive supervision package included post-training supervision via site visits, to which MCSP added mobile mentoring (regular phone calls between supervisors and providers, informative SMS messages and quizzes, and use of the MNH quality dashboard), quarterly service QI planning, quarterly data quality assessments, and structured clinical examinations/evaluations every 6–12 months.

To evaluate the supportive supervision model, MCSP interviewed providers and supervisors who participated in the supportive supervision activity about the feasibility and acceptability of the approach and its effectiveness in helping providers maintain post-training skills. Respondents rated onsite supervision by supervisors highest of all types of supervision mentioned, and 58% of supervisors surveyed “strongly agreed” that supportive supervision helped them maintain supervisees’ skills. Overall, providers and supervisors gave positive feedback about onsite visits, dashboard reviews, data quality assessment, and action planning, while also noting a general preference for onsite supervision over mMentoring. The qualitative portion of the project’s endline study revealed that respondents felt that MCSP’s supportive supervision significantly improved their capacity to deliver quality services. Providers reported that they feel more confident in their clinical abilities and communication style with clients. In addition, providers in lower-level facilities reported feeling more competent to provide safe birth services, instead of referring women to higher-level facilities. Some respondents noted a decrease in referrals from lower-level facilities due to increased capacity and confidence among those providers.

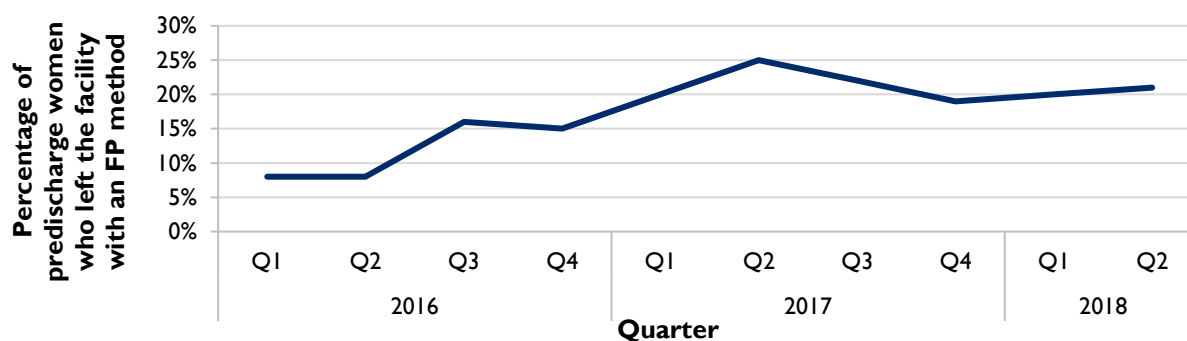
Improved Access to and Quality of FP Services, as Evidenced by the Uptake of Long-Acting PPFM Methods, and a Proof of Concept Targeting Adolescent and First-Time Parents

In addition to providing national-level FP technical support to the Ministry of Public Health through the development and revision of strategic documents, MCSP built the capacity of 1,030 providers across 576 facilities to provide [PPFM services](#). All providers trained in MNH were also trained in PPFM through the integrated training package, enabling those providers working in delivery services to counsel and immediately provide FP services instead of referring postpartum women to the FP department. The integration of MNH and FP services contributed to improved quality of services, and, as a result, the percentage of women who voluntarily adopted a modern PPFM method tripled over the course of MCSP’s interventions (see Figure 3).

Madagascar has a large youth population, with 32% of the total population ages 10–24, and childbearing begins early: 38.9% of women have already become mothers or are pregnant by age 19.³¹ The Ministry of Public Health has identified adolescents and youth as a target population in need of improved access to MNH, ANC, and FP services. MCSP’s [Tanora Mitsinjo Taranaka](#), “Young People Looking after Their Legacy,” initiative was a proof of concept implemented in two districts in Menabe region and developed from formative research on the factors that influence first-time young parents’ access to and use of health care. Under this activity, 75 CHWs and 20 community agents were trained to engage first-time young parents through meetings, home visits, and casual encounters, and distribute invitation cards to health facilities. Thirty-two health care providers were trained to provide adolescent-friendly health care in 11 health centers. The invitation cards were well received in communities and widely used: 72% of 1,430 distributed cards resulted in visits to the health facilities, and as a result, monthly community-based distribution of FP to young clients increased from an average of 35 to 76 clients per CHW.

³¹ Institut National de la Statistique (INSTAT), Programme National de lutte contre le Paludisme (PNLP), Institut Pasteur de Madagascar (IPM) et ICF International. 2016. *Enquête sur les Indicateurs du Paludisme 2016*. Calverton, Maryland: INSTAT, PNL, IPM and ICF International.

Figure 3. Improved uptake of PFP before discharge (n = 183,483 total women delivered in 513 primary health centers; does not include the lactation amenorrhea method)



Increased RI Performance in 10 Districts, Resulting in an Increased Population of Vaccinated Children and a Decreased Dropout Rate

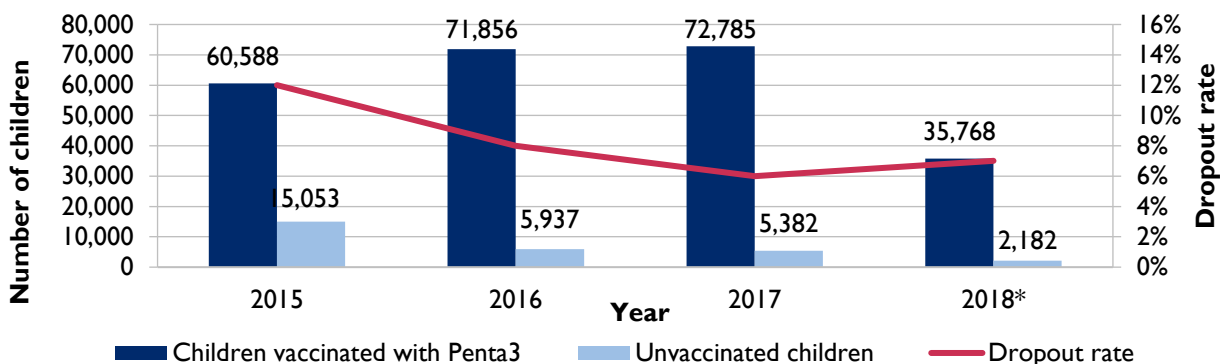
Although Madagascar made progress toward controlling measles, eradicating polio, and eliminating tetanus, national immunization coverage (for Penta3) has been below 80% for the last decade.³² The emergence of 11 cases of vaccine-derived poliovirus between 2014 and 2015 further signified urgent gaps in the RI system. Starting in 2016, MCSP provided [targeted support](#) to RI system strengthening and vaccine-preventable disease control and surveillance (notably for polio and measles) with the Ministry of Public Health/EPI at the national level and in lower-performing districts. Technical support was provided with national-level support for the development of strategic documents, such as a national immunization strategy and comprehensive multiyear plan to guide future years. This support also contributed to the development and dissemination of two immunization job aids used by health workers and community agents to implement the RED approach for immunization system strengthening at district and facility levels. In 10 priority districts with high numbers of undervaccinated infants, MCSP built the capacity of immunization focal points at the regional and district levels, reaching 44 district management team members, 226 providers at health facilities, and hundreds of community agents/partners to foster community engagement with immunization services. MCSP’s efforts contributed to the following key achievements:

- The number of children vaccinated with Penta3 increased in the 10 districts supported by MCSP (see Figure 4). Additionally, MCSP aided the EPI (in collaboration with Gavi/John Snow Inc.) with data quality, assisting with national increases in vaccination coverage in 2016 and 2017.
- The average dropout rate (i.e., number of children given the first dose of the pentavalent vaccine but not receiving all three doses) decreased in the 10 priority districts. In nine of the 10 districts, the dropout rate measured in 2018 was below 10%, indicating improved utilization of immunization services.

MCSP also supported the polio outbreak response in Madagascar, participating in oral polio vaccine campaign activities for children 0–59 months in priority regions and districts. This included analyzing and providing feedback and recommendations on the campaign and RI data (as well as short-term support at the end of 2018 for the measles outbreak response), conducting direct training and supervision to strengthen community-based polio surveillance, and participating with the EPI and partners on outbreak risk assessments. Madagascar made steady progress and received its polio eradication certification from the Regional Certification Commission, a major milestone for the country and region, in June 2018.

³² WHO. 2018. WHO vaccine-preventable diseases: monitoring system. 2018 global summary. WHO UNICEF estimates time series for Madagascar (MDG). WHO website. http://apps.who.int/immunization_monitoring/globalsummary/estimates?c=MDG.

Figure 4. RI performance in 10 MCSP-supported districts, 2015–2017 (and six districts for 2018)*



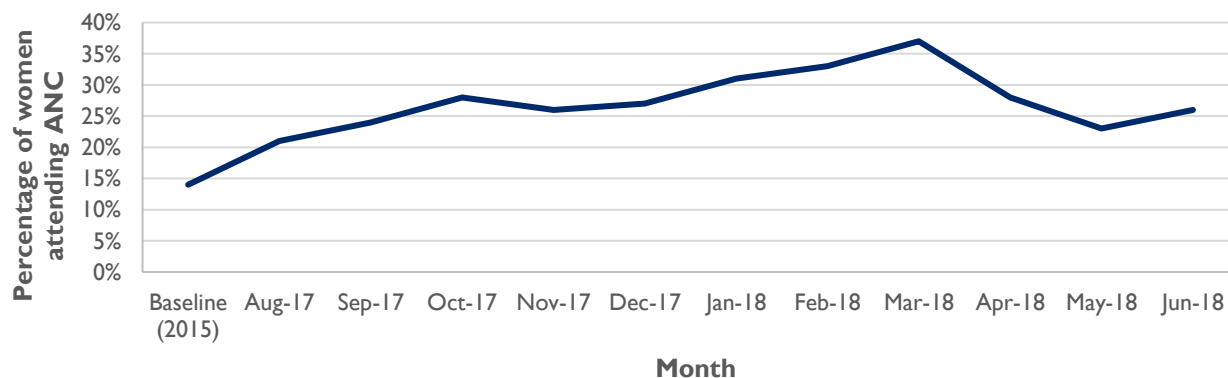
*Technical support from January–June 2018 was only in six districts.

Improved IPTp at the Primary Care Level

In [Madagascar](#), malaria is the fourth leading cause of morbidity in health centers and the fourth leading cause of hospital mortality, per the country’s HMIS in 2016. According to the 2016 Malaria Indicator Survey, only 10.3% of pregnant women take a minimum of three doses of IPTp-SP as recommended by WHO. To increase the uptake of IPTp and improve case management, MCSP strengthened the capacity of 1,321 providers on evidence-based malaria prevention and treatment care, and supported 10 district health management teams to independently conduct malaria technical updates for new providers and supportive supervision. MCSP also introduced a tool to monitor availability of malaria commodities at 176 health facilities; the warning system contributed to a reduction in reported stock-outs of SP within 2 months of implementation (from 64% at its height to 52%). Based on primary health center dashboard data, the percentage of women who received at least three doses of IPTp-SP in 160 project-supported facilities increased from a baseline of 14% in 2015 to 28% by June 2018 (see Figure 5).

At the national level, MCSP supported the Ministry of Public Health in conducting two studies: the first to understand determinants in care seeking among caregivers of children and pregnant women with febrile illness and provider adherence to national malaria prevention and treatment guidelines, and the second to assess health facilities’ operational capacity and readiness for malaria elimination in 11 regions. The results of both studies will inform Madagascar’s national strategy for malaria elimination by revealing the barriers to elimination readiness and recommendations to address these issues as they relate to provider knowledge and capacity. They will also provide insight into the health system’s external/environmental factors, as well as the role and needs of CHWs, caregivers, and community members in malaria surveillance and control. The results of both studies will be disseminated at the close of the project. (See [the technical brief](#) for more details.)

Figure 5. Increased uptake of the third dose of IPTp during ANC in 160 primary health centers



Improved provider capacity to respond to the pneumonic plague epidemic and strengthened the national health system ability to respond to future outbreaks

The 2017 pneumonic plague outbreak in Madagascar presented a major public health emergency, as the outbreaks occurred in regions that were not traditionally plague endemic, revealing gaps in provider knowledge on IPC and personal protective equipment. MCSP was asked to support the MOH in disseminating a new diagnostic and treatment protocol in the five priority regions, and to provide technical support to TWGs on plague response and case management. From the early stages of the epidemic, MCSP prioritized collaboration with the MOH via the TWG to develop a standardized training approach and curriculum for all cadres of health providers, and to engender the MOH's ownership and capacity to implement effective trainings in the future. MCSP then developed a pool of 17 national trainers and 275 regional trainers from 80 districts to support the cascade of provider trainings at the sub-regional level, which capitalized on MCSP's experience working in the 16 USAID priority regions and its use of training strategies focused on high quality capacity building within a short period of time.

In addition to regional and national trainings, MCSP developed job aids for providers, targeting frontline health workers at public health facilities and the district and regional health offices, and also supported the implementation of IPC measures in 12 major hospitals in the priority regions. In the final year of the project, MCSP printed and disseminated 2,000 copies of a technical document detailing the new treatment protocol, and built the capacity of 20 national trainers and 273 providers through refresher trainings on this protocol and IPC. The pre-test and post-test evaluations confirmed a significant improvement in providers' competencies, with an average increase of 14 percentage points. MCSP's support to the MOH has contributed to their increased capacity to manage plague cases, and to the health system's national capacity to respond to future public health emergencies (See the plague [success story](#) for more details).

Recommendations for the Future

- **Implement comprehensive human capacity development approaches to ensure high-quality service provision.** MCSP's LDHF capacity-building approach is an evidence-based, effective model that enables clinical providers to be trained without compromising care for patients. The hands-on, on-the-job, and frequent practice enables providers to improve and maintain multiple complex skills in ways that were not possible in traditional classroom trainings. The use of a structured supportive supervision approach and mentoring reinforce skill and knowledge retention. MCSP recommends that the Ministry of Public Health scale up training and structured supportive supervision and mentoring, together with the use of checklists and job aids, for self-learning to ensure comprehensive, sustainable capacity-building for clinical providers.
- **Accompany capacity-building with improvements to health facility processes, management, and supply chains.** Human capacity development efforts must be combined with efforts to improve the overall quality of service provision in health centers (e.g., by improving patient confidentiality and patient management) and ensure the availability of necessary medical equipment and supplies. MCSP recommends that the Ministry of Public Health adopt piloted strategies for improving commodity tracking and management so that clinical providers have the tools and materials necessary to achieve the expected level of performance.
- **Ensure leadership and commitment of regional, district, and facility managers and health workers from the earliest program stages to improve and sustain quality of care.** MCSP approaches were implemented with the close support of regional, district, and facility managers in the day-to-day context of Madagascar's health system activities. MCSP recommends that the Ministry of Public Health invest in and lead the ongoing support of continuous improvement approaches by Ministry of Public Health actors and partners across the health system to sustain and scale up measured gains.
- **Prioritize data use for decision-making to maintain high-quality service delivery.** MCSP recommends that the Ministry of Public Health invest in and support the ongoing monitoring of RMNCAH quality of care indicators (e.g., through primary health center and hospital dashboards), support the linking of primary health center-level monitoring (e.g., immunization registers) with DHIS2 to inform national strategy and regional and district management processes, and conduct data input

quality checks to guide continuous improvements in RMNCAH services and health outcomes for women and children.

Selected Performance Indicators	
Global or Country Performance Monitoring Plan Indicators	Achievement (Target)
Number of USG-supported service delivery points meeting minimum standards to provide essential maternal and newborn care	822 (target: 822; target achieved)
Percentage of women giving birth who received uterotonic immediately after birth through USG-supported programs	99% (target: 99%; target achieved)
Percentage of pregnant women receiving IPTp3	26% (target: 25%; target exceeded)
Number of MCSP-supported health facilities actively implementing a QI approach	17 (target: 17; target achieved)
Percentage of newborns receiving essential newborn care (ENC) through USG-supported programs	99% (target: 99%; target achieved)
Percentage of target districts that have a systematic approach to track, display, and use priority indicators	100% (target: 100%; target achieved)

For a list of technical products developed by MCSP related to this country, please click [here](#).