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Maternal and Child
Survival Program

MCSP Madagascar Technical Brief

Maternal and Neonatal Health

February 2019

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Project Overview

The USAID-supported Maternal and Child Survival Program (MCSP) supported the Ministry of Public Health (MOH) in Madagascar to accelerate the reduction of maternal and neonatal mortality over the course of its five-year implementation period (2014–2019).

MCSP's interventions aligned with the Roadmap to Accelerate the Reduction of Maternal and Newborn Mortality, especially Strategy 3: "Providing Essential Integrated and Quality Services around Pregnancy and Childbirth focusing on Teenagers and Youth health".

The program intervened in the 16 USAID priority regions to:

1. Provide the MOH with technical support at the national-level in MNH and immunization;
2. Provide technical assistance to improve the quality of maternal and newborn health (MNH) and immunization services in the USAID priority areas;
3. Strengthen providers' capacity to offer long-term FP methods;
4. Improve prevention and management of malaria during pregnancy;
5. Strengthen pre-service training institutions' capacity (IFIRPs) to educate midwives according to international standards and competencies
6. Initiate a process to increase the number of non-specialist physicians capable of providing essential surgery services.



Photo: Jhpiego / Karen Kasmauski

Background

Madagascar's maternal mortality and neonatal mortality rates 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, and have flat-lined. Many factors influence the stagnation and high level of maternal and newborn mortality, including the quality of reproductive health services offered (Millennium Development Goals Survey, 2013).

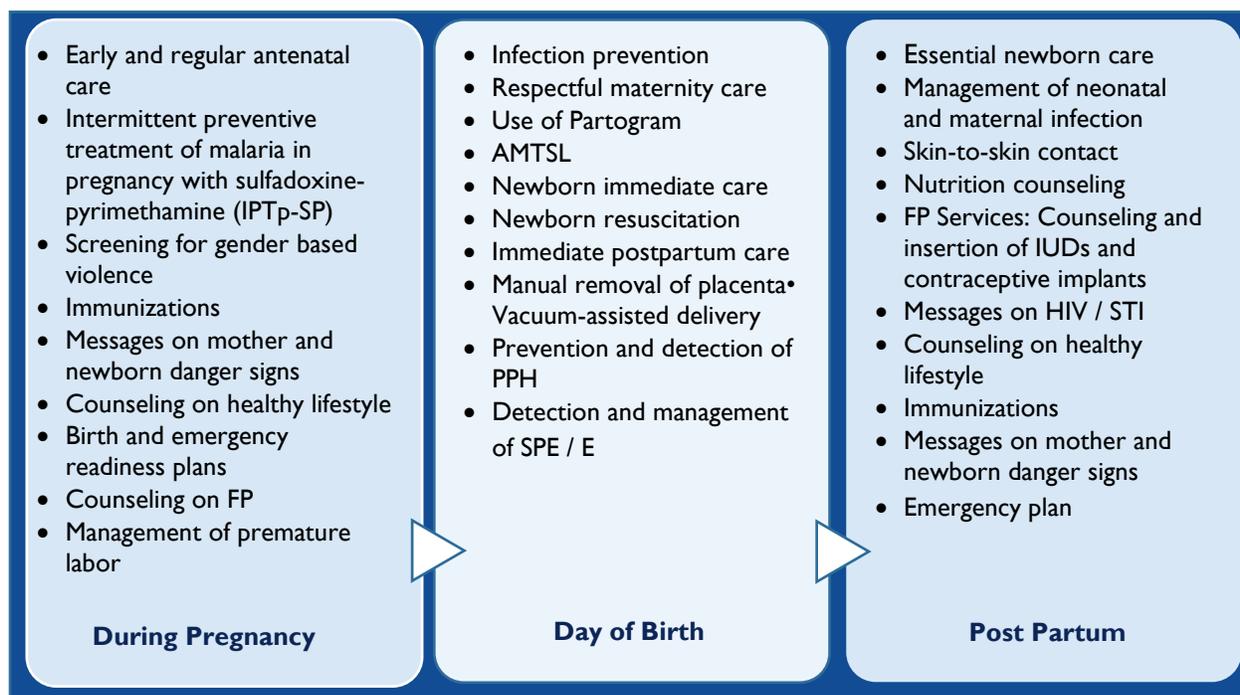
A baseline health facility assessment conducted by MSCP in 2014 in 15 regions of Madagascar revealed many gaps in the availability and operational capacity of the 65 target health facilities assessed: 56% of centres de santé de base (CSBs, primary health centers) have electricity, 53% have access to drinking water and 34% of CSBs and 36% of district hospitals have functional blood pressure machines. Few health providers have received adequate training: only 19% of midwives in CSBs are trained in basic emergency obstetric and neonatal care (BEmONC) and postpartum care and, in general, essential drugs were missing at every level of the health system.

Recommendations from this evaluation were used to draft the Roadmap for the Campaign on Accelerated Reduction of Maternal Mortality in Africa (CARMMA) and the development of MCSP interventions in Madagascar. MCSP works closely with the MOH to support the implementation of the CARMMA Roadmap. This collaboration includes strengthening national policies and guidelines on reproductive and maternal, neonatal, and child health, and improvement of high-impact coverage of evidence-based interventions.

Programmatic Interventions and Approaches

MCSP supported the MOH to update strategies, policies, standards and procedures, capacity building documents (including a training curriculum) and the implementation of various training and supervision approaches. At the national level, MCSP assisted the MOH in developing a favorable MNH policy and implementation framework using evidence-based best practices around birth to reduce maternal and neonatal morbidity and mortality.

Figure I. Key Interventions in the National MNH Curriculum for Improved Care around the Day of Birth



Supported the Development of Maternal, Newborn and Reproductive Health National Policies, Strategic Plans, Guidelines, Standards and National Protocols

In order to foster a favorable environment for the implementation of MNH evidence-based best practices and guide the practice of providers at all levels, several key policies and documents needed to be updated to incorporate global recommendations. Thus, MCSP supported the MOH with a range of policy and guidelines, including development of the CARMMA Roadmap, guidelines on malaria during pregnancy according to WHO recommendations, a National Plan for Improved Essential Surgical Services to increase the number of non-specialist physicians capable of providing essential surgery services, Reproductive Health Norms and Procedures, and integrated management of childhood illness documents to include management of possible serious bacterial infection of newborns/young infants at CSB level.

Strengthened Health Workers' Skills in Bemonc, Routine MNH Care, and Family Planning

In order for ensure the provision of high quality of MNH care to their patients, health workers needed trainings. Thus, MCSP assisted the MOH in developing training materials and job aids to strengthen providers' skills on interventions around birth, including the prenatal and postnatal period. A tailored low-dose, high frequency (LDHF) approach was used to build the capacity of service providers in districts

supported by MCSP. In response to the MOH's restrictions on the number of days providers could spend in off-site trainings, MCSP's LDHF approach promoted learning via short and targeted on-site training in combination with technologies such as mobile telephone use of SMS and quizzes, and e-learning with the participation of trainers and district supervisors as mentors. To support this training approach, MCSP established a skills laboratory with anatomical models at the district-level to enable health workers to continue to perfect their skills. District health management teams were also trained to use training, supervision and evidence-based MNH quality improvement approaches. Thus, district teams will be able to sustain training and supervision activities beyond the life of the project. Within the same line, MCSP supported the establishment of the first regional training office in the Alaotra Mangoro region that coordinated the trainings in the region.

Strengthened Readiness of Health Centers to Provide MNH Care

To enable providers to practice acquired skills and provide quality of care, MCSP provided basic equipment to health facilities for MNH (i.e. ambu-bag and mask for neonatal resuscitation, vacuum extractor for assisted delivery, blood pressure machines, and stethoscopes, etc.) and kits for postpartum intrauterine devices insertion and contraceptive implants. The criteria for the selection of project-supported sites included facilities providing delivery services, within which MCSP prioritized those with high delivery caseloads, in addition to the considerations of USAID and the MOH which focused on equitable access to care across the targeted regions.

Strengthened Monitoring and Use of MNH Service Delivery Data by Health Facility Staff to Improve the Quality of Delivery Services

MCSP introduced the use of a laminated poster data dashboard with MNH quality indicators at supported health facilities to improve quality of MNH care. The dashboards allowed staff from each health facility to visualize eight key MNH indicators and develop an action plan to improve care. Data for these indicators were also sent via SMS to an online electronic dashboard that was available to various officials at the district and regional levels to visualize the indicators and speed up decision-making. Additional information on MCSP's approaches to strengthen the quality of MNH services can be found in the Improving Quality of Maternal and Newborn Care and Postpartum Family Planning Services brief.

Strengthened Pre-Service Midwifery Education

Strengthening the capacity of midwives is an important activity in the Roadmap, and investing in preservice education ensures that graduates are competent and immediately operational, reducing the need for in-service trainings. MCSP supported midwifery pre-service education through: 1) the revision of midwifery curricula to meet standards of the International Confederation of Midwives, 2) updating pre-service schools' teachers and supervisors on evidence-based practices in MNH and training on effective teaching skills, and 3) the establishment of skills development laboratories in pre-service institutions to enable students to practice and master essential skills on anatomical models before doing their clinical practice on real cases resulting in students performing more safely and confidently when in the actual clinical setting.

Strengthened the Midwives' Professional Associations

MCSP has collaborated with the professional associations to promote MNH best practices among their members. Strengthening the midwives professional associations, particularly the Ordre National de Sages-Femmes de Madagascar (ONSFM, National Council of Midwives) aims to improve practice standards and promote midwifery as a professional discipline in Madagascar. MCSP provided technical updates to ONSFM and ANSFM members, which include midwives working in both public and private sectors. MCSP also advocated and supported the ONSFM towards implementation of a midwifery certification based on continuing professional development. To support continuing professional development of midwives, MCSP trained members of ONSFM to provide technical updates to members, and provided key educational materials (including online courses on their website and materials for an skills laboratory where midwives can practice key skills).

Results

Increased Coverage in High Impact MNH Interventions

In collaboration with the MOH, MCSP strengthened the capacity of 1,454 providers and 822 facilities across 16 regions (out of 22) to provide improved MNH services to mothers and newborns.

Figure 2. Lives of Mothers and Newborns Saved in MCSP Supported Facilities in 16 Regions During the Life of the Project (source: facility dashboard data, Oct 2015- Jun 2018, 573 facilities)

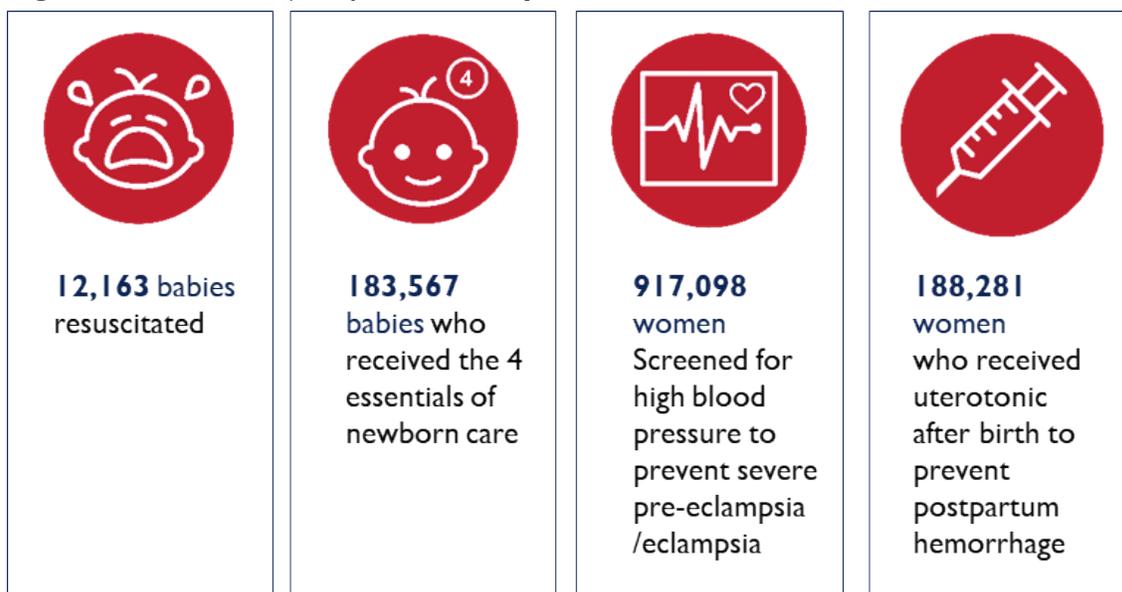
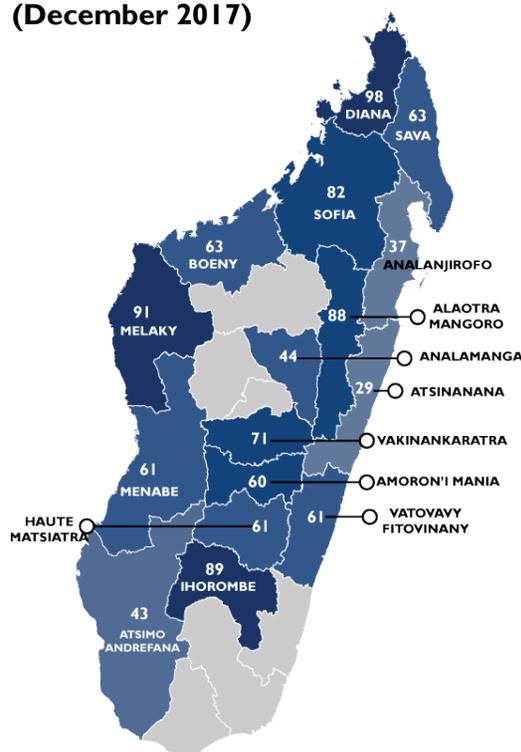
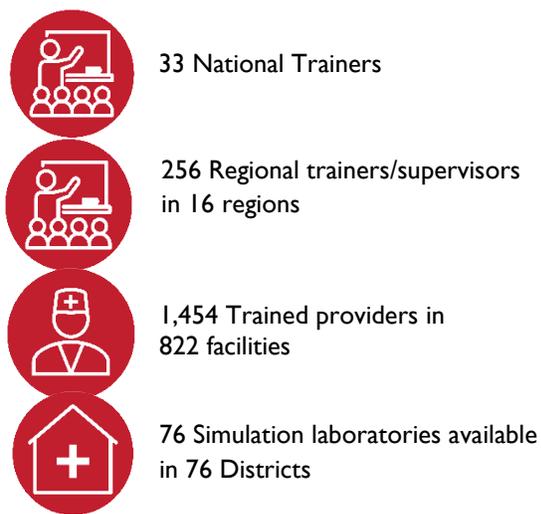


Figure 3 shows the coverage by region of facilities with at least one trained provider and basic MNH equipment, with a range between 40% to 90% of CSB2 in a region supported by MCSP. This high coverage was achieved through collaboration with regional and district teams and development of 33 national trainers, 256 regional trainers and implementation of 76 district skills lab.

Figure 3. Proportion of CSB2 Reached through MCSP Support with Trained Providers and Relevant Equipment (December 2017)



Improved Quality of MNH Services

Improvements in quality of MNH services were tracked during 3.5 years through eight quality of care indicators as part of the MNH facilities Dashboard. The results below are aggregated data from the dashboards.

Improvement in maternal and newborn health services offered at routine and emergency care levels was reflected, among other things, by the following quality indicators:

- Blood pressure (BP) checks to support early detection of severe pre-eclampsia and eclampsia (PE/E) in pregnant women during antenatal care (ANC) improved. At the beginning of the project the proportion of women receiving blood pressure checks was 41%, and by June 2018 had increased significantly to 96% (see Figure 4)
- At the referral hospitals and CSB level, 100% of women received uterotonics for active management of the third stage of labor (AMTSL) for the prevention of postpartum hemorrhage (PPH) in June 2018, an improvement was noted compared to the initial rate of 85% (see Figure 4).
- Management of newborn birth asphyxia improved considerably since resuscitation of newborns not breathing or crying at birth began. At baseline, only 70% were successfully resuscitated, compared to 91% at present (see Figure 5).
- By the end of the program 2018, 99% of newborns benefited from the four elements of essential newborn care: delayed clamping of the cord, immediate drying, immediate skin-to-skin contact and breastfeeding in first hour.

Figure 4. Upward Trends in Screening for Pre-Eclampsia/Eclampsia and Prevention of Postpartum Hemorrhage at 573 MCSP-Supported Health Facilities from 2014-2018 (n=191,454 deliveries and 1,003,401 ANC clients)

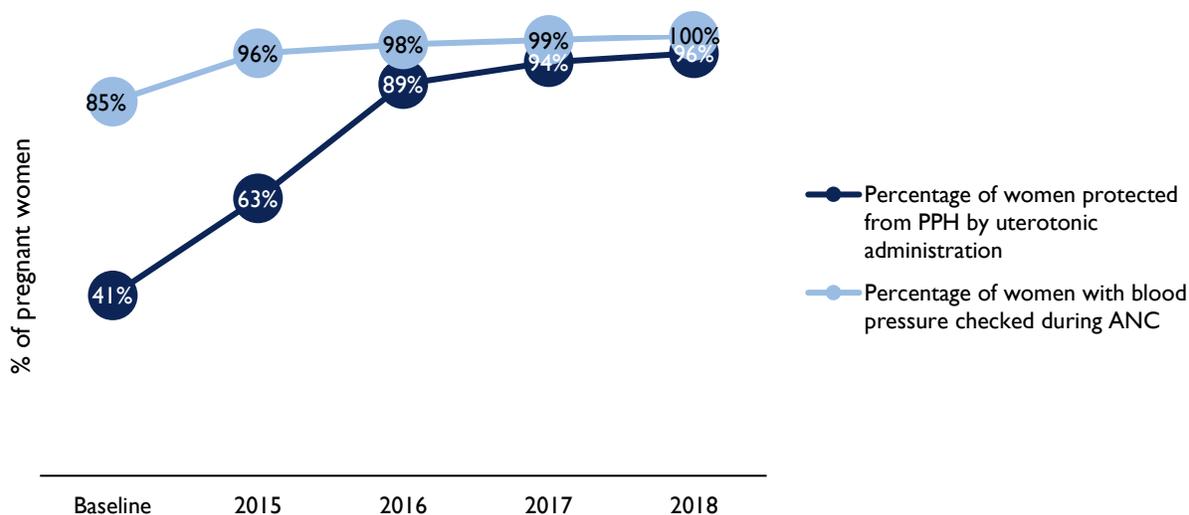
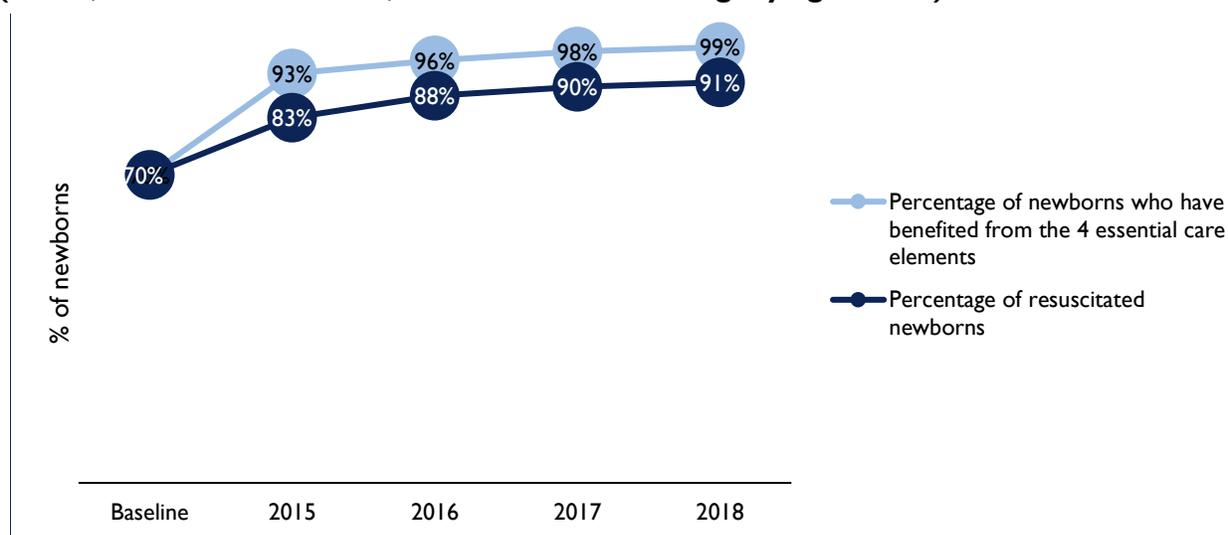


Figure 5. Upward Trends in Essential Newborn Care and Successful Resuscitation of Asphyxiated Newborns at 573 MCSP-Supported Health Facilities from 2014-2018 (n=189,040 live births and 13,668 babies not breathing/crying at birth)



Following MCSP trainings, which also included modules on respectful maternity care and gender-based violence, improvements in providers' professional interaction and behavior with women and their families was also observed in service delivery. Two areas were particularly impacted by changes: guidance on accompanied deliveries and providing the choice of labor and push position. Based on data collected from supported facilities, 9 women out of 10 were allowed and guided by providers to choose their birthing position and were accompanied by the person of their choice during delivery. This contributes to increased satisfaction and well-being of pregnant women coming to deliver at facilities.



Photo credit: MCSP

"I really felt supported [by the midwife] and I was confident," confided Esthelle, 16 years old, after giving birth at CSB2 Maintirano (Melaky region).

Improved outcomes

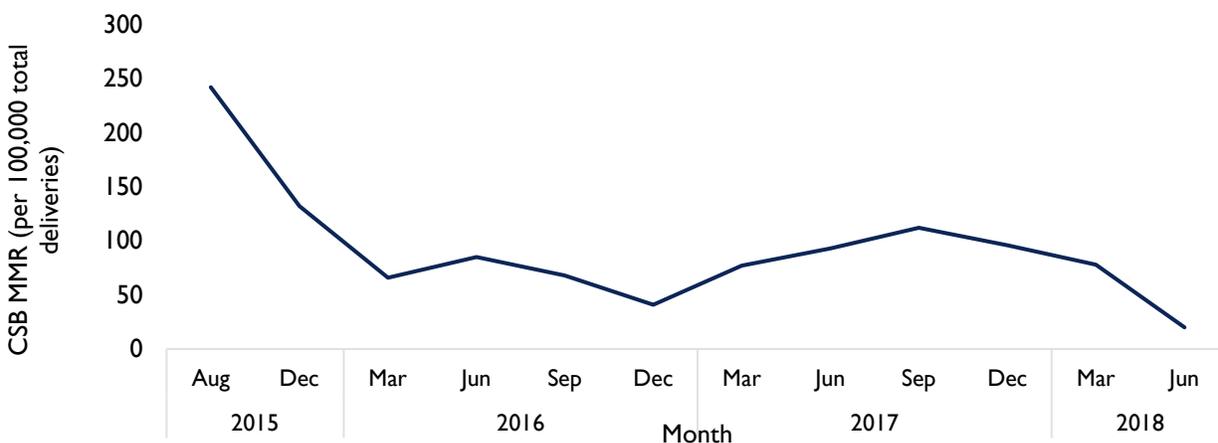
The facilities dashboard allowed the monitoring of not only process indicators, but also some key outcomes indicators. The dashboard revealed that significant reductions in *both* maternal mortality and fresh stillbirths were achieved in primary health facilities in nearly 200,000 deliveries. Same improvements were observed at district and regional hospitals

- The CSB maternal mortality ratio 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 5).
- 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) (see Figure 6).

Figure 6. Reduction in Institutional Stillbirth Rate at CSBs, from 2015 to 2018 (N = 183483 newborns (live and stillbirth) and 2035 total stillborn in 513 FS)



Figure 7. Decreasing Institutional Maternal Mortality Ratio in CSBs from 2015-2018 (N = 183,483 total women delivered and 151 total maternal deaths in 513 CSBs)



Lessons Learned and Program Implications

- The introduction of a laminated poster data dashboard with MNH quality indicators at health facilities addressed a need for service providers to visualize, monitor, and improve their performance and identify barriers to providing quality services. At the end of the project, the MOH and other partners that support the MOH on maternal and newborn health can refer with dashboard's data for better coordination for activities and have more impact in their future interventions.
- MCSP's focus on strengthening the capacity of health personnel included a focus on establishing the *Bureaux Régionaux de Formation* (BRF, regional training offices) for coordination and identification of health provider needs and deployment of human resources.
- The availability of inputs, infrastructure and health personnel rotation are ongoing challenges that affect the quality of services. However, the action plans undertaken by MCSP-supported health facilities, and by the established BRFs show that providers and local MOH offices are able to formulate solutions at their level.
- MCSP support has contributed substantially to improved quality of MNH services as demonstrated by monitoring of dashboard quality indicators. Nevertheless, to support these improvements and scaling of interventions, continuous efforts in supervision and training of new providers are always necessary.

No Need for Referral: Malagasy Doctor Manages Emergency Thanks to MCSP Training

As the Head of the Maternity ward at Andoharanofotsy Health Center – a public facility near Madagascar’s capital – Dr. Rakotoarison, sees many cases like Sylvia Raharinirina. The 21-year-old woman came to the health center to deliver her first baby and, initially, everything was progressing smoothly. However, 30 minutes after delivery, Sylvia suddenly began exhibiting symptoms of shock: low blood pressure, headache, blurred vision, and dizziness. As a result of his training, Dr Rakotoarison was empowered to manage the emergency that otherwise would have been referred to the nearest hospital one hour away. This would have caused delays in care and increased the chances of losing the patient. Referral also would have incurred additional costs for Sylvia’s family. His quick action contributed to a positive result for the young mother.



Photo: MCSP/ Norohaingo Andrianaivo

“If I were not trained by MCSP, I would not be able to cope with such an emergency. Before we received the training from MCSP, we had to refer every complicated case”- Dr Rakotoarison



Photo: MCSP/Karen Kasmauski

This brief is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the terms of the Cooperative Agreement AID-OAA-A-14-00028. The contents are the responsibility of the Maternal and Child Survival Program and do not necessarily reflect the views of USAID or the United States Government.