



Maternal and Child Health Care in the Face of the COVID-19 Epidemic in Madagascar: Challenges and Adaptations for Continuity of Care

Results of a case study in six health facilities in the Analamanga and Atsinanana regions

Study Brief



I. Introduction

Postpartum Hemorrhage (PPH) is commonly defined as blood The COVID-19 pandemic has had major impacts on the global health system and society. To ensure the maintenance of basic health care including maternal and child health, changes in strategies have been observed within the Madagascar's Ministry of Public Health. As part of the APPHC project, the USAID Health Evaluation and Applied Research (HEARD) project supported a case study to support the Ministry in maintaining essential maternal care services in the COVID-19 context. The goal is to document on a small scale the modifications/adaptations made and document the impacts (positive, neutral, or negative) of these modifications on service delivery, to take lessons learned to help the Ministry of Public Health develop the continued response to COVID-19 and other potential epidemics.

The study was conducted in five phases:

- **Phase 1:** development of the data collection and analysis protocol
- **Phase 2:** design and validation of data collection plan tools
- **Phase 3:** collection and analysis of results
- **Phase 4:** drafting of the results document
- **Phase 5:** finalization of the document and sharing with the entities concerned

II. Context in Madagascar

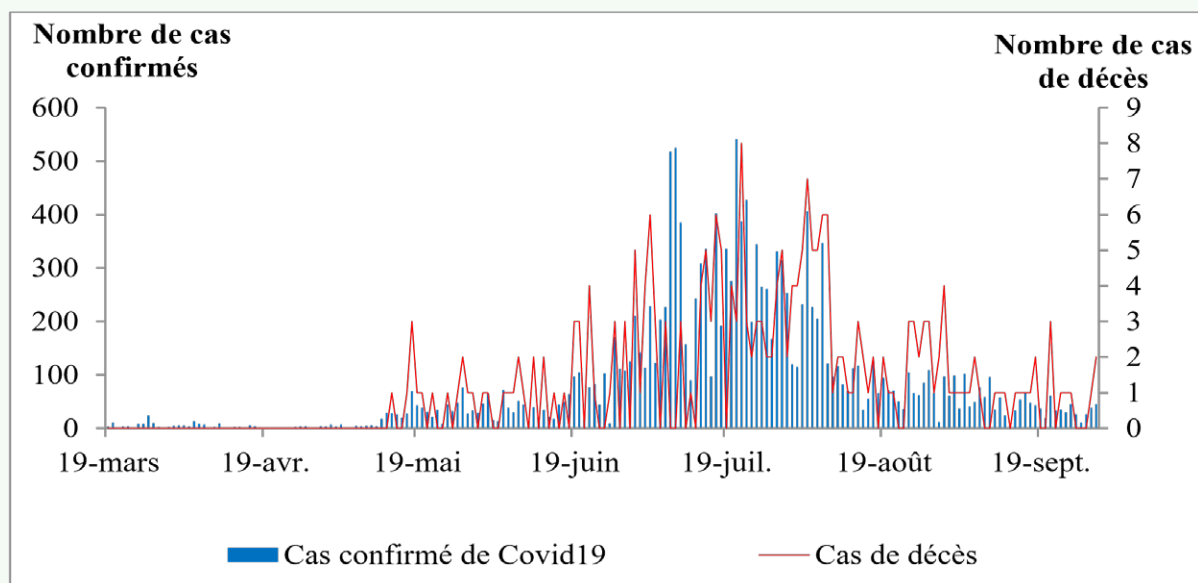
In Madagascar, the first cases of COVID-19 were confirmed on March 19, 2020, with three imported cases. From March 19 to September 20, 2020, the number of deaths due to COVID-19 evolved in parallel with the number of confirmed COVID-19 cases, with a maximum number of cases in June 2020 (Figure 1). The most affected regions were Analamanga and Atsinanana.

To contain this epidemic, the Ministry of Public Health has developed a response plan for COVID-19 whose main strategic orientations are the reinforcement of surveillance and case detection with contact tracing of confirmed cases; the reinforcement and promotion of individual protection measures, containment, and the improvement of patient management capacity. A redeployment of human and material resources took place in order to contain this epidemic. As a result, a reduction in routine activities at all levels of the health system in Madagascar was observed. Faced with the numerous challenges related to the COVID-19 epidemic, the risk of disruption and non-continuity of care is increasing; it is important to document the measures taken and adaptations made and to know the impact of these measures and adaptations to guarantee continuity of care during this epidemic and for future epidemics.

In this context, the USAID HEARD project sought a local partner in Madagascar to conduct a case study on the continuity of maternal and child health care in the face of this COVID-19 pandemic. Consultus Madagascar was selected to conduct the case study.

Figure 1. Time trend of COVID-19 cases and COVID-19 deaths in 2020

(Source: Direction de la Veille Sanitaire et de la Surveillance Épidémiologique et Riposte)



III. Objectives of the study

This case study was conducted in order to:

- a. identify the adaptations that have been made at each level of the health system to enable continuity of maternal and child health services;
- b. assess the outcomes of these adaptations in terms of safe motherhood, complicated deliveries, family planning, and immunizations in the study sites by comparing the period before the COVID-19 epidemic occurred and during the COVID-19 epidemic;
- c. evaluate the management of patients with postpartum hemorrhage (PPH) in the study sites by comparing the period before and during the COVID-19; and,
- d. identify strengths and areas for improvement to ensure continuity of maternal and child care and to improve the quality of services at each level of the health system in the current and future epidemics.

IV. Methodology

A mixed-methods case study was conducted in the two main COVID-19 affected regions. The study period was 12 months from October 2019 to September 2020. This period involved the six months prior to the occurrence of the COVID-19 in Madagascar and the first six months of the epidemic. Three health facilities per region were selected, including University Hospitals (CHU), District Hospitals (CHD) and Basic Health Centers (CSB). The study population consisted of managers at these public and private health facilities, as well as women who had received maternal care in these centers. The beneficiaries were women who had or had not presented obstetrical complications. The quantitative data concerned maternal and child health indicators as well as data on the management of postpartum hemorrhage. Individual interviews with beneficiaries and focus groups with health facility managers were conducted to collect qualitative data. The data were transcribed (qualitative part), analyzed and interpreted. The authorizations of the ethics committees of Madagascar and the URC were obtained before the study was conducted.

V. Results

Difficulties observed in terms of access to care during the epidemic

The main difficulties caused by the COVID-19 epidemic on the health system in general, and on maternal and child health in particular, are the difficulty of access of women to health care facilities (transportation problems, financial difficulties, etc.), the reluctance of the population to use public health centers, the lack of personnel (contamination by the virus, stoppage due to vulnerability, transportation problems, requisitioning for COVID-19 activities, etc.), the changes in certain health center practices at the expense of users' habits (prohibition of visits, shortening of hospitalization time, closing of certain services, etc.), and the postponement of several activities.

Major adaptations

In order to address this issue, the following measures were taken: free transportation for women beneficiaries (in collaboration with partners), reorganization of the health facilities' premises, reorganization of human resources and schedules, and strengthening of the population's awareness.

Effects of the epidemic and adaptations

The impacts of these difficulties and adaptations on maternal and child health indicators varied by case. In general, the number of complicated deliveries such as PPH did not change and the ways in which these complications were managed (drugs used, maneuver performed, referral, transfusion, etc.) also did not change. This may reflect the effectiveness of the adaptations that have been made to COVID-19 in terms of maternal health services.

The average number of outpatient visits at the Basic Health Center, District Health Center, and University Hospital Center levels decreased significantly during the COVID-19 period (Table 1 and Figure 2).

Table 1. Average number of outpatient visits at all levels of the health care system

| | Period | | |
|---------------------------|-----------------|-----------------|---------|
| | Before COVID-19 | During COVID-19 | P value |
| Basic Health Center (BHC) | 879.1 | 493.5 | 0.0005 |
| District Hospital (CHD) | 256.2 | 152.7 | 0.0002 |
| University Hospital (CHU) | 536.2 | 336.2 | 0.0063 |

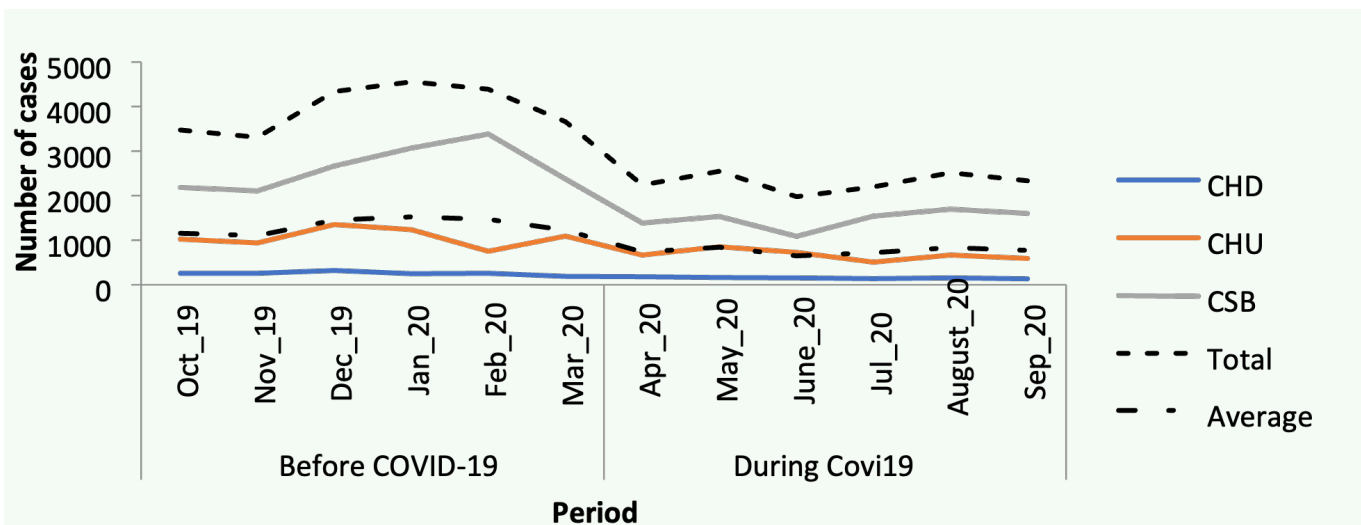


Figure 2: Evolution of the number of outpatient visits by period and type of health facility.

Regarding family planning, a significant decrease in the average number of new users was observed at the university hospital level (28.2 versus 1.9, $p=0.040$). At the CHD level, the number of regular users increased significantly during the COVID-19 period (10.3 versus 46.8, $p=0.0008$). Indeed, the CHD that was included in the study did not report any COVID-19 cases during the first months of the epidemic. This is an important factor influencing the choice of health facilities to attend. In addition, family planning was promoted during this epidemic.

A significant decrease was noted for the fourth prenatal consultations at the CSB level. This decrease can be explained by the fact that some health centers closed this service temporarily during COVID-19 to focus on urgent services and also by the fact that beneficiaries tried to avoid coming to the health centers during this period. A hospital manager said,

“We closed the outpatient department including postnatal follow-up services during COVID-19 to limit the flow and human contact. There was also a reorganization of our facilities. We kept the emergency services. We encouraged people to go to the basic health centers closest to them. We resumed these postnatal consultation activities on September”.



VI. Suggestions

Based on the results of this case study, suggestions for maintaining continuity of maternal health care in the face of COVID-19 or other possible epidemics are as follows:

For the core program:

- Continue supportive supervision of health personnel at all levels of the system
- Make support available to beneficiaries (delivery kit, transportation) and inform beneficiaries about the existence of these supports
- Ensure that all health personnel at all levels are informed of the recommendations and mechanisms put in place by the State and by the program
- Ensure that the population is informed about the measures put in place by the State
- Ensure close collaboration between health authorities and the local representative of other ministries (Ministry of Defense, Ministry of Public Security) to facilitate health-related travel
- Ensure better coordination of activities related to the epidemic
- Periodically supply health care personnel with PPE
- Support health care structures with human resources
- Ensure the transport of personnel

For health centers:

- Prioritize the opening of maternal health services in emergency situations
- Support health care workers by providing psychosocial support, transportation, personal protective equipment, communication credit and internet connection for telecommuting
- Ensure that all services are available daily and if necessary, reduce the schedule only (e.g., only in the morning instead of morning and afternoon). This would limit potential conflicts between the woman's agenda and that of the health center.
- Make drugs and health inputs available on a continuous basis.
- Avoid drug stock-outs in hospital pharmacies
- Respect the referral system for each patient
- Ensure a good organization of the transport of personnel
- Improve the service continuity plan developed by taking into account the good practices identified during the COVID-19 outbreaks

For the community:

- Strengthen communication on the following: use of maternity services (ANC, PNC, FP, Immunization)
- Use various communication channels: media, social networks, personalized communications (SMS) for appointment reminders, collaboration with community agents
- Strengthen communication to inform women about changes in the health centers, available services, separation of suspected or confirmed COVID-19 from others, preventive measures in the health centers, changes in opening hours and days.

VII. Conclusion

Strengthening communication at all levels of the health system and communication to beneficiaries plays a key role in ensuring continuity of care in terms of maternal health. A meeting involving the Ministry of Public Health and technical and financial partners on lessons learned from the epidemic should be planned in order to further improve maternal and child health in general and in case of health emergencies.



This work is part of the Advancing Postpartum Hemorrhage Care (APPHC) partnership supported by USAID and led by the Breakthrough RESEARCH Project and the Health Evaluation and Applied Research Development (HEARD) Project. The APPHC partnership generates and tests solutions to address key implementation barriers for PPH prevention and treatment and contributes to the effective implementation of interventions, strategies, and innovations for PPH in Madagascar and Malawi.

<https://iscollab.org/advancing-postpartum-hemorrhage-care/>

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USAID’S HEALTH EVALUATION AND APPLIED RESEARCH DEVELOPMENT (HEARD) PROJECT



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USAID’s Health Evaluation and Applied Research Development (HEARD) project leverages a global partnership of more than 30 institutions to generate, synthesize, and use evidence to improve the implementation of policies and programs related to USAID priority areas, and crucial for improving health and development in low and middle-income countries.

Breakthrough RESEARCH catalyzes SBC by conducting state-of-the-art research and evaluation and promoting evidence-based solutions to improve health and development programs around the world. Breakthrough RESEARCH is a consortium led by the Population Council in partnership with Avenir Health, ideas42, Institute for Reproductive Health at Georgetown University, Population Reference Bureau, and Tulane University.