

Country Name	Project for Capacity Building of Provincial Health Staff for Maternal and Child Health
Republic of Burundi	

I. Project Outline

Background	The maternal mortality ratio (500 per 100,000 live births, 2010) and the under-five child mortality ratio (96 per 1,000 live births, 2010) ¹ in Burundi were high compared to other Sub-Saharan African countries, and improvement of maternal and child health was an urgent need. The neonatal mortality accounted for 31% of the under-five mortality (20% for perinatal mortality) ² , and the high institutional mortality ratios of 85.7 (maternal mortality ratio of 100,000 live births, 2011) and 6.1 (neonatal mortality ratio of 1,000 live births, 2011) ³ indicated not only limited access to health facilities but also insufficient health care services provided at these facilities.		
Objectives of the Project	Through strengthened capacities to (1) formulate in-service training programs, (2) implement training programs, (3) conduct maternal and perinatal mortality surveillance, (4) conduct monitoring and evaluation, and (5) apply 5S-KAIZEN-TQM ⁴ at the district hospital level in Gitega and Mwaro, the project aims at strengthening the technical capacity for quality continuous care in health facilities focusing on EONC*, BEmONC* and CEmONC*, thereby contributing to the reduction of maternal and perinatal mortality in health facilities. *EONC: Essential Obstetric and Newborn Care BEmONC: Basic Emergency Obstetric and Newborn Care CEmONC: Comprehensive Emergency Obstetric and Newborn Care		
	1. Overall Goal: To contribute to the reduction of maternal and perinatal mortality in health facilities. 2. Project Purpose: To strengthen the technical capacity for quality continuous care in health facilities focusing on EONC, BEmONC and CEmONC.		
Activities of the project	1. Project site: Gitega and Mwaro. 2. Main activities: Training of the health staff on maternal death surveillance and response (MDSR), training of the hospital personnel on 5S-KAIZEN-TQM, training of trainers for in-service training, training of care providers on BEmONC, development of training modules and materials, etc. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 7 persons 2) Trainees received in Japan: 54 persons 3) Training received in third countries: 19 persons 4) Equipment: Training manikins, obstetric suction equipment, incubators, etc. 5) Operational cost: cost for hiring local consultants, etc. Burundian Side 1) Staff allocated: 73 persons 2) Facility: Office space for Japanese experts 3) Operational cost: Cost for maintaining office spaces		
Project Period	(ex-ante) July 2013 to June 2017 (48 months) (actual) August 2013 to August 2018 (60 months) (Extension period: July 2017 to August 2018)	Project Cost	(ex-ante) 410 million yen, (actual) 263 million yen
Implementing Agency	Ministry of Public Health and Fight Against AIDS		
Cooperation Agency in Japan	None.		

II. Result of the Evaluation

1 Relevance/Coherence
[Relevance] <Consistency with the Development Policy of Burundi the time of Ex-ante Evaluation> In the "National Health Development Plan II" (2011-2015), the sector objective was set as "to improve the health of the people, and the three main targets are to reduce mortality from infectious and non-communicable diseases, maternal and neonatal mortality, and under-five mortality. The project was consistent with the development policy of Burundi at the time of ex-ante evaluation. <Consistency with the Development Needs of Burundi at the time of Ex-ante Evaluation> As explained in the project background, the maternal mortality ratio (500 per 100,000 live births, 2010) and the under-five child mortality ratio (96 per 1,000 live births, 2010) in Burundi were high, and improvement of maternal and child health was an urgent need. Thus, the project was consistent with such development needs of Burundi at the time of ex-ante evaluation. <Appropriateness of Project Design/Approach> The project design/approach was appropriate. No problem attributed to the project design/approach was confirmed. <Evaluation Result> In light of the above, the relevance of the project is ③. (④ : very high, ③ : high, ② : moderately low, ① : low. *To be the same

¹ Demographic and Health Survey 2010.

² Countdown to 2015: 2012 Country Profiles (Burundi). http://www.countdown2015mch.org/documents/2012Report/2012/2012_Burundi.pdf

³ Ministry of Public Health and Fight Against AIDS (2012) "Activity Report: Exercise 2011 (Bilan des Activites: Exercice 2011)."

⁴ An approach to improving service quality based on improving the workplace environment through 5S (sort, set, shine, standardize and sustain) activities, to achieve TQM (Total Quality Management).

afterwards.)

[Coherence]

<Consistency with Japan’s ODA Policy at the time of Ex-ante Evaluation>

One of the priority areas was improvement of basic social services focusing on the health and water/hygiene sectors. Support would be provided for decreasing infant mortality ratios and improving maternal and child care services through capacity building of health personnel and strengthening health facilities⁵. Thus, the project was consistent with Japan’s ODA policy for Burundi at the time of ex-ante evaluation.

<Interlinkage with other JICA’s Interventions>

The collaboration/coordination between the project and “Project for Strengthening Capacities of Prince Regent Charles Hospital and Public Health Centers in Bujumbura City for Improvement of Mother and Child Health” (2009-2012) of JICA was planned at the time of ex-ante evaluation was implemented thereafter, and the positive effects of the linkage were confirmed at the time of ex-post evaluation. The training materials and trainers related to 5S approach implemented at the Prince Regent Charles Hospital in the preceding project were utilized in this project, which has resulted in diffusion of the project effects to other provinces.

<Cooperation with Other Institutions/Coordination with International Frameworks>

The cooperation/coordination with other donors was planned at the time of ex-ante evaluation, and the positive effect was confirmed at the time of ex-post evaluation. The project experience has been diffused to other provinces (Cankuzo, Kirundo, Ngozi and Rutana) under the grant aid project in collaboration with the United Nations Children’s Fund (UNICEF), “Project for the Reinforcement of Maternal and Child Health Services in Four Provinces of Burundi” (2018), in particular, the experience of training of the health staff and introduction and utilization of the maternal and child health record books.

<Evaluation Result>

In light of the above, the coherence of the project is ③.

[Evaluation Result of Relevance/Coherence]

In the light above, the relevance/coherence of the project is ③.

2 Effectiveness/Impact

<Status of Achievement for the Project Purpose at the time of Project Completion>

At the time of project completion, the Project Purpose was partially achieved. The proportion of post cesarean infection cases decreased by 2017 but increased in 2018 (Indicator 1). Reasons of the increase in 2018 included the increase in the number of patients beyond the hospital capacity, a shortage of medicine in the country and delays in 5S activities at the hospitals. Regarding the medical records, 20% of maternal deaths and 69% of near miss cases were reported with the medical records in 2014, both improved to 100% (Indicator 2), attributed to the improved recording capacity.

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

By the time of ex-post evaluation, the project effects have continued. The proportion of post cesarean infection cases have drastically decreased in both provinces of Gitega and Mwaro (Indicator 1). To accept more patients and reduce infections, the hospitals have made efforts including training of the staff on infection prevention and control, monthly clinical audits, bimonthly supervision by the reproductive health focal point. There was an increase only in 2020 in Mwaro because there were some emergency and unscheduled cesarean operations conducted without sufficient preparation and doctors. That situation was exacerbated by the pandemic of COVID-19. Also, the lack of the patients’ hygiene after the caesarean was another reason. The number of cesarean operations has been increasing because women who have given birth by cesarean once would have a second and subsequent cesareans. Regarding the medical records, all of maternal deaths and near miss cases have been reported in both provinces (Indicator 2). It has been ensured that all patients have come to hospital with the maternal and child health record book at the time of the consultation, childbirth, and so on. All of the health facilities must have medical records available for patients. Also, the MDSR sessions have been conducted by all hospitals in both provinces. At the time of ex-post evaluation, JICA was implementing the "Project for Strengthening Maternal and Child Health Services" (2019-2023) in Gitega and Mwaro, with the aim of improving continuous maternal and child care, particularly obstetric and newborn care. Ongoing training and other activities through this succeeding project have been considered to be one of the factors contributing to the continued effects of the project.

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

At the time of ex-post evaluation, the Overall Goal has been achieved. The perinatal mortality rate per 1,000 live births in health facilities has decreased much by 2019 but since then has been increasing in both provinces of Gitega and Mwaro (Indicator 1). The fluctuating data needed careful interpretation. It was because there was no good reporting system of infant deaths before 2019 and therefore the comparison with the baseline data was not appropriate. The reason of the increase in the perinatal mortality rate since 2019 in Gitega has been the low quality of care for newborn survival, according to the Gitega Hospital. Another reason has been the increase in unwanted pregnancies at young ages. The maternal mortality ratio per 100,000 in health facilities has decreased in both of the target provinces (Indicator 2). The reason of the drastic decrease in maternal mortality in Gitega has been that more pregnant women have given birth at health facilities and got greater access to quality emergency obstetric, according to the same source. Improved capacity of the health staff was also mentioned as a contributing factor.

<Other Impacts at the time of Ex-post Evaluation>

The following positive impact has been confirmed by the ex-post evaluation. First, The project experience has been used in the succeeding “Project for Strengthening Maternal and Child Health Services” (2019-2023). The experience in training the health staff based on clinical evidence has been utilized. Second, the 5S implementation training model developed by the project has been evaluated, and 5S has been officially adopted as a national strategy for healthcare service quality improvement.

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is ③.

Achievement of the Project Purpose and Overall Goal

Aim	Indicators	Results	Source
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⁵ MOFA, ODA Databook 2012.

<p>(Project Purpose) To strengthen the technical capacity for quality continuous care in health facilities focusing on EONC, BEmONC and CEmONC.</p>	<p>1. Proportion of post cesarean infection case is reduced.</p>	<p><u>Status of the achievement (Status of the continuation): Not achieved (Achieved and continued).</u> (Project Completion)</p> <ul style="list-style-type: none"> The proportion of post cesarean infection cases increased in both provinces. <table border="1" data-bbox="692 197 1299 365"> <thead> <tr> <th></th> <th>2014</th> <th>2017</th> <th>2018 (-August)</th> </tr> </thead> <tbody> <tr> <td>Cesareans</td> <td>238</td> <td>192</td> <td>345</td> </tr> <tr> <td>Infection case</td> <td>18</td> <td>11</td> <td>40</td> </tr> <tr> <td>Proportion</td> <td>7.6%</td> <td>5.7%</td> <td>11.6%</td> </tr> </tbody> </table> <p>(Ex-post Evaluation)</p> <ul style="list-style-type: none"> The proportion of post cesarean infection case have decreased compared to during the project period. <p>(Gitega)</p> <table border="1" data-bbox="692 488 1299 622"> <thead> <tr> <th></th> <th>2019</th> <th>2020</th> <th>2021</th> </tr> </thead> <tbody> <tr> <td>Cesareans</td> <td>951</td> <td>1123</td> <td>1409</td> </tr> <tr> <td>Infection case</td> <td>NA.</td> <td>22</td> <td>42</td> </tr> <tr> <td>Proportion</td> <td>NA</td> <td>2%</td> <td>3%</td> </tr> </tbody> </table> <p>(Mwaro)</p> <table border="1" data-bbox="692 651 1299 786"> <thead> <tr> <th></th> <th>2019</th> <th>2020</th> <th>2021</th> </tr> </thead> <tbody> <tr> <td>Cesareans</td> <td>785</td> <td>837</td> <td>959</td> </tr> <tr> <td>Infection case</td> <td>31</td> <td>129</td> <td>20</td> </tr> <tr> <td>Proportion</td> <td>4%</td> <td>16%</td> <td>2%</td> </tr> </tbody> </table>		2014	2017	2018 (-August)	Cesareans	238	192	345	Infection case	18	11	40	Proportion	7.6%	5.7%	11.6%		2019	2020	2021	Cesareans	951	1123	1409	Infection case	NA.	22	42	Proportion	NA	2%	3%		2019	2020	2021	Cesareans	785	837	959	Infection case	31	129	20	Proportion	4%	16%	2%	<p>Project Completion Report.</p> <p>Gitega Hospital, Mwaro Health Province.</p>												
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<p>(Overall goal) To contribute to the reduction of maternal and perinatal mortality in health facilities.</p>	<p>1. Reduce 20 % of perinatal mortality rate in health facilities in Mwaro and Gitega provinces</p> <p>2. Reduce 20% of the maternal mortality ratio in health facilities in Mwaro and Gitega</p>	<p><u>Status of the achievement: Partially achieved.</u> (Ex-post Evaluation)</p> <ul style="list-style-type: none"> The perinatal mortality rate per 1,000 in health facilities has decrease d by 2019 but since then has been increasing in both provinces. <table border="1" data-bbox="692 1742 1299 1839"> <thead> <tr> <th></th> <th>2013</th> <th>2019</th> <th>2020</th> <th>2021</th> </tr> </thead> <tbody> <tr> <td>Gitega</td> <td>25.8</td> <td>2.94</td> <td>17.6</td> <td>24.7 (-4%)</td> </tr> <tr> <td>Mwaro</td> <td>22.0</td> <td>9.5</td> <td>10.4</td> <td>14.0 (-36%)</td> </tr> </tbody> </table> <p><u>Status of the achievement: Achieved beyond the plan.</u> (Ex-post Evaluation)</p> <ul style="list-style-type: none"> The maternal mortality ratio per 100,000 in health facilities has decreased in both provinces. <table border="1" data-bbox="692 1951 1299 2042"> <thead> <tr> <th></th> <th>2013</th> <th>2019</th> <th>2020</th> <th>2021</th> </tr> </thead> <tbody> <tr> <td>Gitega</td> <td>125.3</td> <td>2.2</td> <td>1.9</td> <td>1.9 (-98%)</td> </tr> <tr> <td>Mwaro</td> <td>112.7</td> <td>-</td> <td>12.4</td> <td>58.7 (-48%)</td> </tr> </tbody> </table>		2013	2019	2020	2021	Gitega	25.8	2.94	17.6	24.7 (-4%)	Mwaro	22.0	9.5	10.4	14.0 (-36%)		2013	2019	2020	2021	Gitega	125.3	2.2	1.9	1.9 (-98%)	Mwaro	112.7	-	12.4	58.7 (-48%)	<p>Gitega Hospital, Mwaro Health Province.</p> <p>Gitega Hospital, Mwaro Health Province.</p>																														
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3 Efficiency

Although the project cost was within the plan (ratio against the plan: 64%), the project period exceeded the plan (ratio against the plan:

125%). The project cost was less than the planned because the JICA experts needed to leave the country due to security issues and shortened the contract. Regarding the project period, the project extended one year to implement activities suspended by the security issues. Outputs were produced as planned. Therefore, the efficiency of the project is ③.

4 Sustainability

<Policy Aspect>

Capacity building of the health personnel on maternal and child health care services has been prioritized in the “National Health Policy” (2016-2025). Thus, the political backup has been expected to sustain in the coming years.

<Institutional/Organizational Aspect>

For provision of maternal and child health care services including capacity building of the health staff, the Ministry of Public Health and Fight against AIDS has been responsible for coordination, overall monitoring and evaluation of training interventions. The Provincial Health Offices have ensured the implementation of these interventions by supporting the Health District Offices. The Ministry of Public Health and Fight against AIDS has not assigned a sufficient number of health staff (doctors, nurses and others) to provide maternal and child health care services to the Provincial Health Offices of Gitega and Mwaro. The lack of the personnel at the provincial level has been partly attributed to the fact that some doctors and midwives have not received a salary higher than that of the Government of Burundi. The performance of the health facilities has been supervised by the Provincial Doctor or the hospital director, and this supportive supervision has helped retaining and motivating the health staff in resource-constrained settings. There has been no plan to change these institutional settings.

<Technical Aspect>

The health staff (physicians, anesthesiology nurses, etc.) of Gitega and Mwaro Provinces have sustained necessary skills and knowledge for maternal and child health care, as training opportunities have been given continuously in the country with financial support of the development partners. Training topics covered MDSR, 5S-KAIZEN-TQM and BEmONC from 2019 to 2021. Each of the Provincial Health Offices of Gitega and Mwaro have developed the annual training plan, and, therefore, it is expected that training opportunities would continue. The Maternal Mortality Surveillance Audiovisual Materials and training materials on EONC and safe cesarean section developed by the project have been utilized, as well as the provided medical equipment for EONC.

<Financial Aspect>

Financial data was not available in the ex-post evaluation. However, it was presumed that the Provincial Health Offices of Gitega and Mwaro have not been able to secure the necessary budget for providing maternal and child health care services, including training and supervision, as evidenced in the mid-term evaluation of the “Reproductive, Maternal, Neonatal, Child and Adolescent Health Strategic Plan” (2019-2023) which was carried out in March 2022. The Ministry of Public Health and Fight against AIDS has requested and relied on development partners to strengthen basic training programs for maternal and child health care providers.

<Environmental and Social Aspect>

No issue on environmental and social aspect by the capacity building of the health personnel has been observed, and it has not been necessary to take any countermeasures.

<Evaluation Result>

In light of the above, slight problems have been observed in terms of the institutional/organizational and financial aspects of the implementing agency. However, the overall sustainability of the project effects is ③.

5 Summary of the Evaluation

The project has achieved the Project Purpose which was to strengthen the technical capacity for quality continuous care in health facilities focusing on EONC, BEmONC and CEmONC. The project effects have continued, and the Overall Goal has been achieved as the maternal and perinatal mortality have mostly reduced. Furthermore, positive impacts including the incorporation of the project result (5S approach) in the national health strategy has been observed. With regard to the project efficiency, the project period exceeded the plan. Regarding the coherence, the project experience has been diffused to other provinces in collaboration with other donors. As for the sustainability, the health staff of Gitega and Mwaro Provinces have received continuous training opportunities and sustained necessary skills and knowledge for maternal and child health care.

Considering all of the above points, this project is evaluated to be highly satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

- It is recommended that the Ministry of Public Health and Fight against AIDS assign specialist doctors with higher salaries to motivate them to work at the provincial level.
- It is recommended that the Ministry of Public Health and Fight against AIDS include the topic of effective use of the maternal and child health record book in the ongoing training. Since the health record book contains all the information related to previous pregnancies, it is very useful in providing quality prenatal consultations and responding emergent operations. Improved prenatal consultation will help to reduce unscheduled caesareans.
- It is recommended to the Ministry of Public Health and Fight Against AIDS to invest more in the infrastructure development including the establishment of health facilities and provision of medicines to respond to emergent or unscheduled operations and the needs of increasing population.

Lessons Learned for JICA:

- The Project Purpose was partially achieved by the time of project completion, and it has been achieved since the project completion. The effects of the project have fully continued, and positive impacts including the incorporation of the project result (5S approach) in the national health strategy were witnessed. To realize this, the project made efforts so that the project activities were in line with and part of the strategies and annual plans of the implementing agencies. It also supported the coordination capacity for scaling up the project outputs to other provinces. Thus, it is important to align the project activities and outputs with the government strategies and plans and to conduct capacity building activities for improving coordination capacity from the project formulation phase so that the project outputs will be politically adopted and implemented in the field.



Before (left) and after (right) of 5S KAIZEN practises



Maternal and child health record book