

Country Name	Project for Strengthening Primary Health Care System
Republic of Paraguay	

I. Project Outline

Background	<p>In Paraguay, it presented the worst record of main indicators on reproductive and child health in the South American region before the project; the under-five mortality rate was 23 per 1,000 live births (verses regional average 18), and the maternal mortality rate was 95 per 100,000 live births (verses regional average 66) (WHOSIS 2009). Major factors included bottlenecks of health administration, lack of skills and knowledge of medical staff, insufficient infrastructure and medical supplies, poor access to medical facilities due to poverty especially in terms of lack of transportation means, and heavy medical expenses. To ameliorate this condition, the government of Paraguay prioritized a policy of improving access to first-level health services, and the Ministry of Public Health and Social Welfare (MHSW) established the Unit of Health and Family (Unidades de Salud de la Familia: USF). There were, however, no rules and manuals developed for the implementation of PHC at the department level as well as issues that revolved in a lack of human resources at the USF.</p>				
Objectives of the Project	<p>Through concretization of the desired Primary Health Care (PHC) system, strengthening of the management capacities of health service providers and local authorities and, improvement of quality of USF's services with an established emergency contact system in the Department of Caaguazú, the project aimed at establishing a health service system centered on the USF, thereby contributing to improving the level of service for maternal and newborn care in Department of Caaguazú.</p> <ol style="list-style-type: none"> Overall Goal: The maternal and child health status is improved in the target area. Project Purpose: A health service system centered on the USF is established in the target area. 				
Activities of the Project	<ol style="list-style-type: none"> Project Site: Department of Caaguazú (V Health Region)¹ Main Activities: (1) Concretization of the PHC system in terms of health services (including the USF) in the MHSW (2) Strengthening of the management capacities of health services providers and administrative authorities within the area of designated USF's activities. (3) Improvement of the quality of USF's services. (4) Establishment of emergency contact system at the department level. Inputs (to carry out the above activities): <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> Japanese Side 1) Experts: 8 persons 2) Experts from the third country: 8 persons (from El Salvador) 3) Trainees Received in Japan: 10 persons 4) Third country training: 18 persons (in El Salvador) 5) Equipment: PC, Printer, sphygmomanometer, weight scale, stethoscope, ambulance, vehicle, etc. 6) Local cost </td> <td style="width: 50%; vertical-align: top;"> Paraguayan Side 1) Staff Allocated: 17 persons 2) Land and facilities: office space for experts 3) Local cost: administrative and operational expenses </td> </tr> </table> 			Japanese Side 1) Experts: 8 persons 2) Experts from the third country: 8 persons (from El Salvador) 3) Trainees Received in Japan: 10 persons 4) Third country training: 18 persons (in El Salvador) 5) Equipment: PC, Printer, sphygmomanometer, weight scale, stethoscope, ambulance, vehicle, etc. 6) Local cost	Paraguayan Side 1) Staff Allocated: 17 persons 2) Land and facilities: office space for experts 3) Local cost: administrative and operational expenses
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Project Period	February 2012 – January 2017 (Extension period: February 2016 – January 2017)	Project Cost	(ex-ante) 321 million yen, (actual) 321 million yen		
Implementing agency	Ministry of Public Health and Social Welfare (MHSW), Directorate General of Primary Health Care, Directorate of Sanitation in the V Health Region (Since 2018, the Directorate General of Primary Health Care has been renamed as the Directorate of Primary Health, transferred to be under the Directorate General of Development of Health Networks and Services)				
Cooperation Agency in Japan	--				

II. Result of the Evaluation

<Constraints on Evaluation>

Due to travel restrictions and lockdown measures raised during the COVID-19 pandemic, data gathered in the rural areas during the ex-post evaluation was lower in quantity and quality as on-site data collection, as well as direct observation, was not as feasible as planned. In addition, as there was an alarming number of infections in the Caaguazú department, the circumstances did not allow to conduct planned field survey considering the infection risk in visiting hospitals. It should be noted that operative personnel in target sites had to pay undivided attention to COVID-19 patients at the time of the ex-post evaluation. Nonetheless, mitigation measures were taken as follows; 1) rely more on existing monitoring data collected prior to COVID-19, 2) increase scope of desk-based review of administrative data, 3) use of remote data collection and analysis methods where available.

< Special Perspectives Considered in the Ex-Post Evaluation >

Issues in the logical configuration in the Project Design Matrix (PDM) and misplaced indicators for the Overall Goal

As the Project Purpose described as "a health service system centered on the USF is established " the project mainly addressed the improvement of the PHC system on the whole in the Department of Caaguazú. Nonetheless, the Overall Goal was determined as "the maternal and child health status is improved in the target area," which was limited to cover reproductive and child health. Thus, it has no causal relationship to the Project Purpose and conceptually confused correlation with causality in the PDM. Further, the indicators of the Overall Goal were not to measure the service quality per se for reproductive and child health by the continuous efforts, but the improvement of the maternal and infant mortality rates whose causes are deemed to be

¹ The V Health Region is designated by the Directorate of Primary Health Care and the Directorate of Sanitation as a region under the jurisdiction of the Department of Caaguazú. The location of the V Region is therefore on a par with the Department of Caaguazú composed of 22 districts as an administrative division.

considerably varied to achieve the respective target values. In an effort of making the evaluation logically coherent in the ex-post evaluation, the time-series data of hypertensive pregnancies was sought to supplement the reproductive child health status and contribution of the project activities but there was no such data readily available. Furthermore, due to the change of statistical method in data measurement since 2017, the evaluation of the data in the official database was difficult and inconclusive.

1 Relevance

<Consistency with the Development Policy of Paraguay at the Time of Ex-Ante Evaluation >

The project was consistent with the development policies of Paraguay at the time of ex-ante evaluation. In the "Public Policy for Quality of Life and Health," issued by the MHSW, it guaranteed the people's right to receive and to be benefitted from health care services. It also addressed the establishment of a legal framework for the purpose, as well as poverty reduction through programs focused on those with needs, implementation of PHC, and promotion of public participation.

<Consistency with the Development Needs of Paraguay at the Time of Ex-Ante Evaluation >

The project was consistent with the needs of Paraguay at the time of ex-ante evaluation. Local health service delivery had some imminent challenges; 1) regulations and protocol manuals for PHC implementation as well as the system at the prefecture-level were not put in place, 2) insufficient education and training for personnel in the USF, 3) lack of a well-defined mechanism for emergency response extended to cover the medical institutions within the regional referral system.

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with Japan's ODA policy towards Paraguay. The three priority areas of the assistance were poverty alleviation, sustainable economic development, and governance. In poverty alleviation, it addressed the enhancement of social services that included the improvement of health care².

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

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

The Project Purpose was achieved. The number of clients who seek medical consultation at the USF in the Department of Caaguazú increased by 55% in 2016 compared to that of 2012 (indicator1). The percentage of pregnant women who received prenatal medical examinations during the fourth month of pregnancy in the Department of Caaguazú exceeded 50% in 2015 (indicator 2). The percentage of hospital delivery in the Department of Caaguazú reached 95% in 2015 (indicator 3). The number of hypertensive patients being monitored by the USF in the Department of Caaguazú increased by 56.3% in 2015 compared to that of 2012 (Indicator 4).

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

The project effects have partially continued after project completion. The number of health workers (N=249) at the time of the ex-post evaluation associated with the USF and PHC system deployed in the Department of Caaguazú almost doubled the number before the project (N=133). Some of the training modules of the project have been implemented after project completion. According to the MHSW database, the number of medical consultations at the USFs in the Department of Caaguazú steadily increased from 229,677 cases (2016) to 260,736 cases (2019) that account for a 76% increase from the baseline year of 2012. On the other hand, regarding the percentage of pregnant women who received prenatal medical examinations during the fourth months of pregnancy, compared with 50% achievement in 2015, the percentage has been dropped to 29.4% (2016) and those remained substantially lower than the once achieved target value of 50% until the time of the ex-post evaluation in 2020. By the same token, the percentages of hospital delivery have remained generally on a plateau since project completion. As for the number of hypertensive patients being monitored by the USFs in the Department of Caaguazú, the numbers have more than doubled over the past 3 years. Note, however, the data readily available could not specify the number of hypertensive pregnancies. Thus, the data only imply the aggregated number of all hypertensive patients who have access to the USFs in the area.

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

The Overall Goal had not been achieved at the time of ex-post evaluation. The maternal mortality rate per 100,000 live births in the V Health Region was still higher than 50 in the past 4 years (2017-2020) (Indicator 1). The infant mortality rate per 1,000 live births in the V Health Region was still higher than 10 in the past 4 years (2017-2020) (Indicator 2).

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

There were positive impacts observed in the survey for the ex-post evaluation. Women empowerment regarding issues of gender violence was notably observed as women became capable of openly seeking help on time in the health service system and verbalizing imminent risks to the USF professionals and community agents. In the meantime, no negative impact was confirmed.

<Evaluation Result>

Therefore, the effectiveness/impact of the project is fair.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results
(Project Purpose) The health service system centered on the USF is established in the target area.	Indicator 1: The number of clients who seek medical consultation at the USFs in the Department of Caaguazú increases by 50% compared to 2012.	Status of the Achievement: achieved (continued) (Project Completion) The number of clients who seek medical consultation at the USF in 2016 (note the total sum from January to October of the year) was 229,677. Thus, compared to the actual number of 148,113 in 2012, the increase rate was 55%. (Ex-post Evaluation) The number of clients was 230,632 (2018) and 260,736 (2019), respectively. Thus, the increase rate was 56% and 76%. The reasons for the steady increase were the expanded coverage of PHC service delivery by the USF and the improvement of service quality and the public recognition of the services.
	Indicator 2:	Status of the Achievement: achieved (not continued)

² Ministry of Foreign Affairs, "ODA Country Databook" (2011)

	<p>The percentage of pregnant women who received prenatal medical examinations during the fourth month of pregnancy in the Department of Caaguazú exceeds by 50%</p>	<p>(Project Completion) The percentage of pregnant women who received medical examinations during the 4th month of pregnancy was 50% in 2015. (Ex-post Evaluation) Despite the 50% achievement reported in 2015 above, according to the time-series data obtained by the survey, it has been lower than 50 % since project completion as follows. And as indicated even lower than the level before the project, it is concluded not continued :29.4% (2016), 25.8% (2017), 25.7% (2018) 36.8% (2019) 30.5% (2020).</p>																																								
	<p>Indicator 3: The percentage of hospital delivery in the Department of Caaguazú reaches 95%.</p>	<p>Status of the Achievement: achieved (partially continued) (Project Completion) The percentage of hospital delivery in 2015 was 95%. (Ex-post Evaluation) Despite the 95% achievement reported in 2015 above, according to the time-series data obtained by the survey, the percentage in 2015 was 64.7%. As it was not possible to verify raw data in 2015 that create the difference in the percentage of the year at the time of the ex-post evaluation, the status of continuation was thus judged based on the percentage obtained by the survey: 63.7% (2016), 63.1% (2017), 61.7% (2018), 63.0% (2019), 47.4% (2020). Due to the COVID-19 epidemic since early 2020, the government-imposed restrictions on inter-city travel and pressure on hospitals may have affected hospital delivery in 2020. Based on the time series from 2015 to 2019, they have remained on a plateau, it was thus deemed partially continued.</p>																																								
	<p>Indicator 4: The number of hypertensive patients being monitored by the USFs in the Department of Caaguazú increases by 50% compared to 2012.</p>	<p>Status of the Achievement: achieved (continued) (Project Completion) The number of hypertensive patients regularly controlled by the USF in 2012 was 33,783, whereas in 2015 was 52,818 that made the rate of increase 56.3%. (Ex-post Evaluation) The numbers of hypertensive patients under the USFs' surveillance after project completion were 107,645 (2018), 115,056 (2019), 137,390 (2020). All exceeded a 50%, rate of increase from 2012 and doubled in the number with comparison to 52,818 (2015). One of the likely reasons for the increase was a greater control and periodic visits exercised by all the USFs, consequently, the interventions may have motivated patients in communities to be monitored properly. Note, however, it was confirmed that the data readily available could not specify the number of treated hypertensive pregnancies that implies the safer delivery in the Overall Goal below.</p>																																								
<p>(Overall Goal) The maternal and child health status is improved in the target area.</p>	<p>Indicator 1: The Maternal Mortality Rate per 100,000 live births in the V Health Region is below 50.</p> <p>Indicator 2: The Infant Mortality Rate per 1,000 live births in the V Health Region is lower than 10.</p>	<p>(Ex-post Evaluation) not achieved Table 1: The Maternal Mortality Rate in the V Health Region</p> <table border="1" data-bbox="758 1288 1532 1579"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Baseline</th> <th colspan="3">Actual</th> </tr> <tr> <th>2014</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Maternal Mortality (per 100,000 live births)</td> <td>72.3</td> <td>86.7</td> <td>63.1</td> <td>78.8</td> <td>97.7</td> </tr> <tr> <td>The number of childbirths (hospital delivery)</td> <td>8,295</td> <td>8,071</td> <td>7,914</td> <td>7,610</td> <td>6,138</td> </tr> </tbody> </table> <p>(Ex-post Evaluation) not achieved Table 2: The Infant Mortality Rate in the V Health Region</p> <table border="1" data-bbox="758 1668 1532 1848"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Baseline</th> <th colspan="3">Actual</th> </tr> <tr> <th>2014</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Infant Mortality (per 1,000 live births)</td> <td>13.3</td> <td>11.5</td> <td>13.2</td> <td>12.6</td> <td>11.0</td> </tr> </tbody> </table>		Baseline		Actual			2014	2017	2018	2019	2020	Maternal Mortality (per 100,000 live births)	72.3	86.7	63.1	78.8	97.7	The number of childbirths (hospital delivery)	8,295	8,071	7,914	7,610	6,138		Baseline		Actual			2014	2017	2018	2019	2020	Infant Mortality (per 1,000 live births)	13.3	11.5	13.2	12.6	11.0
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Source: SSIEV (Vital Statistics Computer Sub-System)

3 Efficiency

The project cost was within the plan (ratio against the plan: 100%), whereas the project period exceeded the plan (ratio against the plan: 125%). The outputs were produced as planned. Therefore, the efficiency of the project is fair.

4 Sustainability

<Policy Aspect>

Promotion of the PHC has been fundamentally important as addressed in the “Regional strategic plan” of the V Health Region (2011-2013). The plan remained valid without any revisions at the time of the ex-post evaluation. The plan has emphasized the promotion of quality of life and health with equity through strategic operation for reproductive child health as well as the extension of an effective

network of service delivery in the V Health Region. Based on the said plan, collaborative works with the municipalities and local councils have been conducted for the installation of the new USFs of the department. As such, training for the local officials in “early childhood development” in the 10 USFs (out of 45 USFs) was implemented within the V Health Region.

< Institutional/Organizational Aspect>

The roles and responsibilities of MHSW have not been changed. However, according to the survey results, although it was required to have one dentist and 5 community agents in every 3 USFs, it was observed impossible and understaffed due to a lack of public funding for personnel costs. It thus resulted that a team of personnel with different tasks and expertise could not cover all the areas of the PHC as much as expected to provide quality services with the official capacities. Thus, it was deemed that it remained insufficient in terms of manpower. Implementation of multipurpose personnel who would collaborate in the data management has been absent in current SICIAP³ and other subsystems.

<Technical Aspect>

According to the survey results, they perceived that all the required skills were considered generally sufficient, as various training modules and technical assistance have been provided to enable to improve the capacities to promote the PHC in the V Health Region. Having trained through various courses, the personnel have been aware of adhering to the manual, the importance of their mission as well as coordinated teamwork for the PHC in health networks in the Region. As such, they have committed to supporting USF activities, including the promotion of awareness-raising and participation in communities. As for coordination with the district capitals to improve the health network system, the job description manual and the work guide were shared with all regional programs and their head offices.

To mention the recent responses to the COVID-19 pandemic in the context of the project, the teleconsultation modality was launched in the region in September 2020. As a result, 2,195 inquiries from communities through this modality were made within the 5 months. Further, a comprehensive situation analysis of micro territories was carried out by a total of 45 USFs and duly reported to the MHSW Headquarters. Their suggested solutions to imminent emergencies have been swiftly executed. Considering the high-risk group, the Mobile Health Unit⁴ made it possible to intervene in the situation in nursing homes. As for the early detection of respiratory symptoms of the coronavirus, a digital monitoring form (in excel format) was created to be systematically reported on a daily/monthly basis to conduct personalized monitoring required in communities in the region.

<Financial Aspect>

It has not guaranteed that the amount of budget would be disbursed as no financial data were presented to be verified. Even though the annual budget was allocated, the amount may not be fully disbursed, and the public funding would not cover all the operation costs as expected. According to the survey results, as stated in the issue of existing manpower along with necessary expenditure to provide PHC services to remote areas, there was a concern for the insufficient level of the budget in light of the required funding level to cover comprehensive implementation of the USF activities and the extension of USFs network.

<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. Therefore, the sustainability of the effectiveness through the project is fair.

5 Summary of the Evaluation

The project achieved the Project Purpose but could not achieve the Overall Goal. Nonetheless, it was deemed that the capacities being enhanced have positively affected the PHC in a broad sense in the V Health Region. As for sustainability, institutionally understaffed to perform required services and financially challenging to further extend the service coverage especially the geographically remote areas in the region. As for the efficiency, the project period exceeded the plan.

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

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency/JICA::

During the ex-post evaluation survey, some data to measure the effects of the project were not readily available and found some critical discrepancies that failed robust comparison. Valid data collection, analysis as well as management are fundamental for informed decisions especially in terms of resource allocation to enforce essential activities, it is necessary to select and utilize verifiable indicators where data can be collected from routine systems for regular monitoring and evaluation.

Lessons Learned for JICA:

As it turned out, high-level staff participated more than operational staff in the project. However, in reality, the operational staff members are permanently employed and engaged in daily tasks in the institution. Whereas the high-level staff members (such as hospital director and deputy director) in general are transferred and replaced every 4 years. If more operational staff had been invited to participate in the project, a wider participatory methodology could have been continuously carried out and thus contributed to enhancing the sustainability of the project. Therefore, it is recommended that JICA should deliberately verify the common practice of human resource management of the relevant organizations and then consider the greater participation of permanent staff who engage in the tasks longer than staff in a management position.

It is also clearly important to check from the project-design stage as to how the pertinent data is defined and measured. As such, it is imperative to identify who and/or which unit would be in charge of the data management through due procedures to serve the public interest such as PHC. Furthermore, during the project implementation, it is essential to ensure their involvement for effective project monitoring from the initial planning as the majority of health personnel are not usually required to be trained to use statistical tools and data collection.

³ SICIAP (for its acronym in Spanish): Information System and Automated Inventory Control of Paraguay. It is a system to control the distribution and supply of medicines, and data can be crossed on the type of patients, in addition to favoring USF networks.

⁴ The Mobile Health Unit is made of a team of doctors and nurses, whose function is to cover the territories where the USF has not yet been set up. The unit is expected to fulfill the same functions in working with communities.



Health promotion in rural communities



Training of USF members by regional facilitators