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Ex-post Evaluation Report on the Program for the Improvement of Maternal and Child Health in Chimaltenango

한국국제협력단

# Ex-post Evaluation Report on the Program for the Improvement of Maternal and Child Health in Chimaltenango

2013. 12



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for the Improvement of Maternal and Child  
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The Korea International Cooperation Agency (KOICA) performs various types of evaluation in order to secure accountability and achieve better development results by learning.

KOICA conducts evaluations within different phases of projects and programs, such as ex-ante evaluations, interim evaluations, end-of-project evaluations, and ex-post evaluations. Moreover, sector evaluations, country program evaluations, thematic evaluations, and modality evaluations are also performed.

In order to ensure the independence of evaluation contents and results, a large amount of evaluation work is carried out by external evaluators. Also, the Evaluation Office directly reports evaluation results to the President of KOICA.

KOICA has a feedback system under which planning and project operation departments take evaluation findings into account in programming and implementation. Evaluation reports are widely disseminated to staffs and management within KOICA, as well as to stakeholders both in Korea and partner countries. All evaluation reports published by KOICA are posted on the KOICA website. ([www.koica.go.kr](http://www.koica.go.kr))

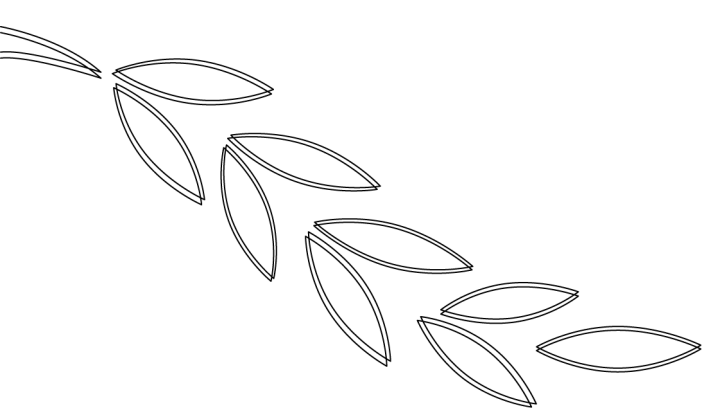
This evaluation study was entrusted to Kyunghee University by KOICA for the purpose of independent evaluation research. The views expressed in this report do not necessarily reflect KOICA's position.



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# I . Introduction

1. Evaluation Background
2. Evaluation Purpose and Scope
3. Evaluation Subject







# I Introduction



## 1. Evaluation Background

- Korea International Cooperation Agency (KOICA) aims to contribute to reducing maternal and child death rates in developing countries by creating safe environment for childbirth as well as by improving access to maternal and child health facilities.
- The “Maternal and Child Health Project at Chimaltenango, Guatemala”(hereinafter referred to as “the Project”) consists of the elements for the improvement of Guatemala’s basic maternal and child health infrastructure such as construction of maternal and child health center, construction of public clinic, and capacity building for nurses and healthcare providers.
- Hence, it is necessary to examine each project element with regards to the achievement of outcomes and contribution to the Project’s higher goal of reducing maternal and infant death rates of Guatemala. Recommendations for future maternal and child health projects should be drawn based on a cause analysis of success and failure of each project element.



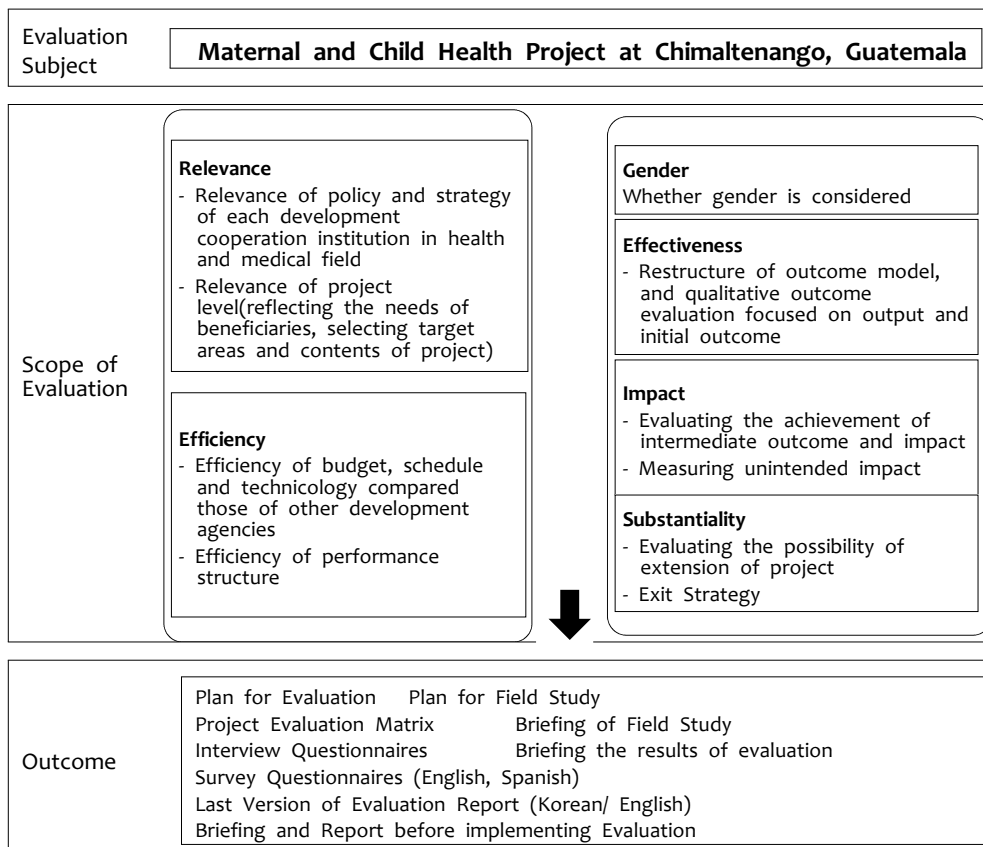
## 2. Evaluation Purpose and Scope

### A. Purpose

- Drawing the outcomes of the Project through an ex-post evaluation
- Drawing recommendations and strategic lessons for successful implementations of future maternal and child health projects in the partner countries including Guatemala

### B. Scope

- The scope of this ex-post evaluation is as follows.





### **3. Evaluation Subject**

#### **A. Project Objectives**

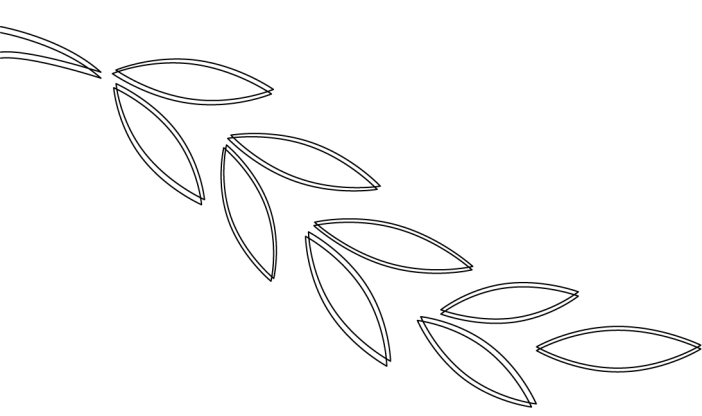
- Development Goal (Highest Goal)
  - Contribute to achieving the MDGs in maternal and child health sector
- Objectives (Initial Outcomes)
  - Creating a safe childbirth environment
  - Expanding antenatal care services for mothers

#### **B. Project Background**

- Political and diplomatic aspect
  - Guatemala is one of the 3 main partner countries for Korean ODA grant projects in Latin America. Total Korean export amount to Guatemala is about USD 500 million per year; and Korea maintains an annual trade surplus of USD 300 million to Guatemala.
  - During the presidential visit to Guatemala in 2011, the President of Korea emphasized that Guatemala is one of the most important partner countries in Latin America, that the Korean Government desires to build and strengthen a future-oriented relationship with Guatemala.
- Health and medical aspect
  - According to the WHO World Health Statistics Report 2003, Guatemala recorded maternal mortality rate(MMR) of 240 per 100,000, infant mortality rate(IMR) of 27 per 1,000, and neonatal mortality rate(NMR) of 19 per 1,000. Guatemala's maternal and child health situation was then one of the

worst among the major partner countries in Latin America, together with Haiti and Bolivia.

- A maternal and child health project is highly important in Guatemala, which displays one of the poorest maternal and child health indicators in Latin America. An immediate improvement of the indicators is expected upon the constructions of maternal and child health center within Chimaltenango National Hospital, and of maternal and child health clinic in Patzun.



## II . Methodology and Evaluation Process

1. Evaluation Criteria and Methodologies
2. Limitations and Constraints of Evaluation
3. Internal and External Research and Investigation Methodologies





## II

# Methodology and Evaluation



### 1. Evaluation Criteria and Methodologies

#### Criteria

- The 5 evaluation criteria recommended by OECD DAC, i.e. relevance, efficiency, effectiveness, impact (ripple effect), and sustainability, are followed along with considerations on gender and environment
- Being an ex-post evaluation, this evaluation report focuses on the effectiveness, impact, and sustainability after the termination of the Project.

#### Method

- This evaluation incorporates participatory evaluation method, which contributes to drawing highly relevant questions, and to improving the performance of the program.
- The evaluation method may as well strengthen the voice and capacity of the participants and improve the organizational learning in terms of sustainability.
- Thus, analyses on each criterion will be based on a reconstructed PDM for Evaluation (PDMe), mainly focusing on the measurement of medium to long term impacts and sustainability.





## 2. Limitations and Constraints of Evaluation

- Statistical data between 2008 and 2012 on maternal death rate, registration rate of pregnant women, delivery rate in particular health facilities, and degree of improvement on maternal and child health were requested to Guatemalan Ministry of Health and Social Affairs, CH, and PMCHC; however, only a few of which were accessible.
- WHO classifies delivery methods into delivery in health facilities, delivery with trained assistants, delivery with untrained assistants, and delivery at home. However, in Guatemala, a delivery in health facilities indicates a delivery with trained assistants or professional health staff.
- The data management systems of government institutions and hospitals are not well-established, so the expressions for a number of indicators were not consistent. For instance, WHO expresses maternal death in terms of maternal mortality ratio per 100,000 live births, but the local indicators of Guatemala uses maternal mortality ratio mixed with maternal death rate.
- Enforcement Planner/CM(Cosmopolitan), and the construction company(Cosmopolitan) could not be contacted for an interview.
- Although the survey papers were distributed in advance, and some surveys were conducted while doing the field investigation, the return rate of the survey papers was significantly low in some regions. In Patzun, specifically, the survey papers distributed to the midwives, who are the beneficiaries of capacity building, were not collected at all.
- A list of desired interviewees were sent to the relevant institutions, but some of the beneficiaries were not approachable due to personal reasons like change of jobs.



### **3. Internal and External Research and Investigation Methodologies**

#### **A. Literature Investigation**

- Collecting and analyzing the documents related to Korea's maternal and child health projects to Chimaltenango, Guatemala.
- Comprehending the development goals of the Guatemalan Ministry of Health and Social Affairs, together with the current context, policies, and main problems in the health sector of Guatemala.
- Drawing an effective and practical recommendations to improve KOICA's support for maternal and child health of Guatemala by examining relevant strategies and situational data of major aid agencies.

#### **B. Internal and External Interviews**

- In-depth interviews were conducted to relevant persons from KOICA, PMC, recipient government, recipient institution, implementer, and other donor agencies.

## C. Surveys

### Overview

Item	Surveys targeting recipient government personnel, project stakeholders, and the users of the recipient institution
Contents	Relevance, efficiency, effectiveness, impact (ripple effect), sustainability, and crosscutting issues related to the construction of CH and PMCHC
Targets	Guatemalan government institutions, relevant persons from CH and PMCHC (including the beneficiaries of invited training), and the users of CH and PMCHC
Methods	Complementary use of both On-line and Off-line methods; Collecting survey papers prior to the visit interviews

## D. Field Investigation

### Overview

Item	Field Investigation for Maternal and Child Health Project at Chimaltenango, Guatemala
Date	2013. 07. 28 (Sun) - 2013. 08. 17 (Sat)
Procedure	Field investigation launching report→Launching meeting of evaluation team→Begin field investigation→Wrap-up field investigation
Contents	<ul style="list-style-type: none"> <li>- Situation analysis on the use of medical facilities in the target region</li> <li>- Maintenance and management status of hospital facilities, administrative problems and improvement suggestions</li> <li>- Level of maternal health improvement in the target region as the result of the Project</li> <li>- Contribution to antenatal care system and capacity building for professional medical labor force (nurse), and nonprofessional labor force (midwives)</li> <li>- Self-reliance of recipient institution</li> </ul>
Breakdown	<ul style="list-style-type: none"> <li>- Collecting local information and conducting local interviews</li> <li>- Checking survey results and collecting responses</li> <li>- Conducting group discussions and local evaluation sessions</li> <li>- Reflecting on the field investigation results; sharing results with recipient government and KOICA</li> </ul>

## E. PDMe

Criteria	Sub-Questions	Performance Indicators	Sources of Information	Information Collection
Relevance	<ul style="list-style-type: none"> <li>Does the Project correspond with national development strategy and the sector priorities of Guatemala?</li> </ul>	<ul style="list-style-type: none"> <li>Correspondence with the national development strategy of Guatemala</li> <li>Correspondence with the policies of the Guatemalan Ministry of Health and Social Affairs</li> </ul>	<ul style="list-style-type: none"> <li>National Development Strategy of Guatemala</li> <li>Policies of Guatemalan Ministry of Health and Social Affairs</li> <li>Government Personnel</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> <li>Interview</li> </ul>
	<ul style="list-style-type: none"> <li>Does the Project correspond with health sector policies of KOICA as well as the country partnership strategy of the Korean Government?</li> </ul>	<ul style="list-style-type: none"> <li>Correspondence with the country partnership strategy of Korea</li> <li>Correspondence with the health sector aid policies of KOICA</li> </ul>	<ul style="list-style-type: none"> <li>Partnership Strategies for Guatemala</li> <li>KOICA Health Sector Mid-Term Plan</li> <li>KOICA Statistics</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> </ul>
	<ul style="list-style-type: none"> <li>Is the goal of the Project relevant to the accomplishment of MDGs?</li> </ul>	<ul style="list-style-type: none"> <li>Comparative analysis between the project goal and goals 3,4, and 5 of MDGs</li> </ul>	<ul style="list-style-type: none"> <li>MDGs Indicators for Guatemala</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> </ul>
	<ul style="list-style-type: none"> <li>Is the Project in an harmony with the maternal and child health projects of other aid agencies?</li> </ul>	<ul style="list-style-type: none"> <li>Situational data of maternal and child health capacity building projects of other aid agencies</li> </ul>	<ul style="list-style-type: none"> <li>Documents on maternal and child healthcare projects of other aid agencies</li> </ul>	<ul style="list-style-type: none"> <li>Comparative case analysis</li> </ul>
	<ul style="list-style-type: none"> <li>In the planning stage, was there an appropriate process to accommodate the opinions</li> </ul>	<ul style="list-style-type: none"> <li>Regional level of maternal and child health in Guatemala</li> </ul>	<ul style="list-style-type: none"> <li>Analytical data on maternal and child health situation</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> <li>Interview</li> </ul>

Criteria	Sub-Questions	Performance Indicators	Sources of Information	Information Collection
	of the beneficiaries?	<ul style="list-style-type: none"> <li>• Relevance of the operational budget for the maternal and child health facility</li> <li>• Frequency and rate of utilization of maternal and child health facility</li> </ul>	<ul style="list-style-type: none"> <li>• Preliminary Survey Report</li> <li>• Record of Discussion</li> <li>• Interim Evaluation Report</li> <li>• Guatemalan Government Personnel</li> </ul>	<ul style="list-style-type: none"> <li>• Survey</li> </ul>
	<ul style="list-style-type: none"> <li>• Was a sufficient agreement drawn with the recipient government in the process of target area selection?</li> </ul>	<ul style="list-style-type: none"> <li>• Agreement process for target area selection</li> </ul>	<ul style="list-style-type: none"> <li>• Preliminary Survey Report</li> <li>• Record of Discussion</li> <li>• Interim Evaluation Report</li> <li>• Guatemalan Government Personnel</li> </ul>	<ul style="list-style-type: none"> <li>• Literature</li> <li>• Investigation</li> <li>• Interview</li> <li>• Survey</li> </ul>
	<ul style="list-style-type: none"> <li>• Does the newly developed antenatal care service meet the local demand?</li> </ul>	<ul style="list-style-type: none"> <li>• Correspondence between antenatal care program and current maternal and child health situation</li> </ul>	<ul style="list-style-type: none"> <li>• Current health situation of Guatemala</li> <li>• Interim Evaluation Report</li> </ul>	<ul style="list-style-type: none"> <li>• Literature</li> <li>• Investigation</li> <li>• Interview</li> <li>• Survey</li> </ul>
Effectiveness	<ul style="list-style-type: none"> <li>• Does the output correspond with the plans of the Project? <ul style="list-style-type: none"> <li>- When the maternal and child health facility was constructed, were all accommodations and equipments installed and utilized as planned?</li> <li>- Was a capacity building program for healthcare providers (nurses, midwives) provided?</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Degree of installation and utilization of maternal and child health facility and equipments relative to the initial plan</li> <li>• Establishment of Basic operational plan for the training center</li> <li>• Quality of the teaching materials and the capacity building program for healthcare providers</li> </ul>	<ul style="list-style-type: none"> <li>• Examination report on maternal and child health facility</li> <li>• Basic operational plan for the training center</li> <li>• Curriculum and teaching materials for capacity building program for healthcare providers</li> <li>• Report on invited training outcomes</li> <li>• Report on specialists</li> </ul>	<ul style="list-style-type: none"> <li>• Literature</li> <li>• Investigation</li> <li>• Direct Observation</li> </ul>

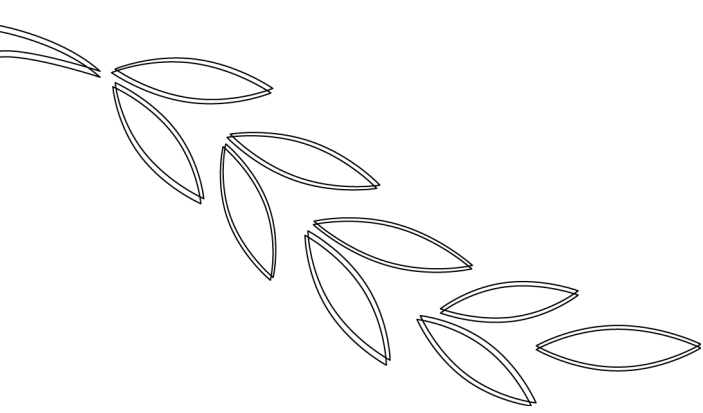
Criteria	Sub-Questions	Performance Indicators	Sources of Information	Information Collection
	<ul style="list-style-type: none"> <li>- Were an antenatal care project and its teaching materials developed?</li> </ul>	<ul style="list-style-type: none"> <li>• Quality of the teaching materials and the antenatal care project</li> </ul>	<p>dispatch</p>	
	<ul style="list-style-type: none"> <li>• Are there possible measures to improve the operational effectiveness of the maternal and child healthcare center?</li> </ul>	<ul style="list-style-type: none"> <li>• Basic operational plan for the training center</li> </ul>	<ul style="list-style-type: none"> <li>• Project Completion Report</li> <li>• Completion Evaluation Report</li> <li>• Basic operational plan for the training center</li> </ul>	<ul style="list-style-type: none"> <li>• Literature Investigation</li> </ul>
	<ul style="list-style-type: none"> <li>• Has the childbirth environment improved as the planned initial outcomes of the Project? <ul style="list-style-type: none"> <li>- Has the utilization rate for maternal and child health center and public clinic increased in case of delivery?</li> <li>- Has the number of trained maternal and child healthcare providers increased?</li> <li>- Has an emergency operation system for mothers established?</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Number of delivery in maternal and child health center and public clinic</li> <li>• Increase rate of trained maternal and child healthcare providers</li> <li>• Increase rate of delivery attended by trained maternal and child healthcare providers</li> <li>• Establishment of emergency operation system for mothers</li> <li>• Quality and utilization of provided equipments</li> </ul>	<ul style="list-style-type: none"> <li>• Situational report on the management of maternal and child health facility</li> <li>• Situational report on the performance of trained healthcare providers</li> <li>• Curriculum and teaching materials</li> <li>• Management register of training budget</li> <li>• Report on invited training outcomes</li> <li>• Report on specialists dispatch</li> <li>• Relevant personnel from hospital</li> </ul>	<ul style="list-style-type: none"> <li>• Literature Investigation</li> <li>• Direct Observations</li> <li>• Interview</li> </ul>

Criteria	Sub-Questions	Performance Indicators	Sources of Information	Information Collection
Efficiency	<ul style="list-style-type: none"> <li>Was the input of all human and physical resources (labor, capital, time) timely enough to create the maximum outcome from the minimum cost?</li> </ul>	<ul style="list-style-type: none"> <li>Timeliness of labor input</li> <li>Timeliness of capital input</li> <li>Relevance of time allocation</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary Survey Report</li> <li>Record of Discussion</li> <li>Interim Evaluation Report</li> <li>Project Completion Report</li> <li>PMC and other relevant personnel</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> <li>Interview</li> </ul>
	<ul style="list-style-type: none"> <li>Were the outcomes relative to input efficient compared to other similar projects of KOICA?</li> </ul>	<ul style="list-style-type: none"> <li>Comparison of the construction costs for health center and public clinic</li> <li>Comparison of cost for equipment provision</li> </ul>	<ul style="list-style-type: none"> <li>Documents on KOICA's maternal and child health projects</li> </ul>	<ul style="list-style-type: none"> <li>Comparative Case Analysis</li> </ul>
	<ul style="list-style-type: none"> <li>Was an efficient channel for mediation and communication established among the stakeholders?</li> </ul>	<ul style="list-style-type: none"> <li>Consultative committee among KOICA, Guatemala Ministry of Health and Social Affairs, and PMC</li> </ul>	<ul style="list-style-type: none"> <li>Project Completion Report</li> <li>Basic operational plan for the training center</li> <li>PMC and other relevant personnel</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> <li>Interview</li> </ul>
Impact (Ripple Effect)	<ul style="list-style-type: none"> <li>What are the structural factors negatively affecting efficiency?</li> </ul>	<ul style="list-style-type: none"> <li>The role of the Ministry of Health and Social Affairs in the management of maternal and child health project</li> <li>Leadership to health projects</li> </ul>	<ul style="list-style-type: none"> <li>Health management system of Guatemala</li> <li>Health management and capacity building structure and governance</li> <li>Stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> <li>Interview</li> </ul>
	<ul style="list-style-type: none"> <li>Was the maternal and child health environment of Guatemala improved?</li> </ul>	<ul style="list-style-type: none"> <li>Degree of improvement in the maternal and child mortality as the result of the Project</li> </ul>	<ul style="list-style-type: none"> <li>Current health situation of Guatemala</li> <li>Government personnel</li> <li>Local residents</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> <li>Survey</li> <li>Interview</li> </ul>

Criteria	Sub-Questions	Performance Indicators	Sources of Information	Information Collection
Sustainability		<ul style="list-style-type: none"> <li>Change in the number of childbirths attended by trained healthcare providers</li> </ul>		
	<ul style="list-style-type: none"> <li>Was the awareness on maternal and child health in Guatemala improved?</li> </ul>	<ul style="list-style-type: none"> <li>Registration rate of pregnant women and women of childbearing age to antenatal care program</li> <li>The number of trained midwives</li> </ul>	<ul style="list-style-type: none"> <li>Current health situation of Guatemala</li> <li>Local residents</li> </ul>	<ul style="list-style-type: none"> <li>Survey</li> <li>Interview</li> </ul>
	<ul style="list-style-type: none"> <li>Were the health projects in the related field expanded?</li> </ul>	<ul style="list-style-type: none"> <li>Current situation of developed and expanded health programs</li> <li>Frequency and purpose of utilizing the maternal and child healthcare center</li> </ul>	<ul style="list-style-type: none"> <li>Situational report on health sector development project in Guatemala</li> </ul>	<ul style="list-style-type: none"> <li>Direct Observation and Interview</li> </ul>
	<ul style="list-style-type: none"> <li>Is the Guatemalan Government capable of sustaining political and institutional support?</li> <li>Has the recipient country established policy and institutional strategies to support maternal and child health enhancement?</li> </ul>	<ul style="list-style-type: none"> <li>Presence of medium to long term plans for the improvement of maternal and child health of Guatemala</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary Survey Report</li> <li>Record of Discussion</li> <li>Project Completion Report</li> <li>Government personnel</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> <li>Interview</li> </ul>
	<ul style="list-style-type: none"> <li>Were the central and provincial maternal and child health systems well linked?</li> </ul>	<ul style="list-style-type: none"> <li>Cooperative situation and future plans for central and provincial maternal and child health systems</li> </ul>	<ul style="list-style-type: none"> <li>Situational report on health sector development project in Guatemala</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> </ul>



Criteria	Sub-Questions	Performance Indicators	Sources of Information	Information Collection
	<ul style="list-style-type: none"> <li>Do the maternal and child health facility have effective operational structure?</li> </ul>	<ul style="list-style-type: none"> <li>Organizational structure and division of duties in the maternal and child healthcare center</li> </ul>	<ul style="list-style-type: none"> <li>Organizational chart and operational plan of the maternal and child healthcare center</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> </ul>
	<ul style="list-style-type: none"> <li>Do the maternal and child health facility have technical capacity to manage and maintain related facilities?</li> </ul>	<ul style="list-style-type: none"> <li>Management and repair techniques for the equipments in the training facility</li> </ul>	<ul style="list-style-type: none"> <li>Management register for equipments, organizational chart, and operational plan</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> </ul>
	<ul style="list-style-type: none"> <li>Can the outcomes of the Project be sustained and expanded? <ul style="list-style-type: none"> <li>- Does the antenatal care system well converge with the social and cultural conditions in Guatemala?</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The Guatemalan Government's finance system for the training program</li> <li>Current budget for training</li> <li>Labor input situation</li> <li>Change in the number of beneficiaries from trained midwives</li> </ul>	<ul style="list-style-type: none"> <li>Annual budget and expenditure related to maternal and child health</li> <li>Situational report on health sector development project in Guatemala</li> <li>Person in charge from the hospital</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> <li>Survey</li> <li>Interview</li> </ul>
Others (Gender Mainstreaming)	<ul style="list-style-type: none"> <li>Did the Project give considerations on gender mainstreaming since its planning stage?</li> <li>Did the Project make any impact on gender relationships and gender equality among the beneficiaries?</li> <li>Was a social capacity building for female healthcare providers in Guatemala achieved?</li> </ul>	<ul style="list-style-type: none"> <li>Presence of strategies for gender mainstreaming</li> <li>Improvement on the participation and social position of women</li> <li>Changes in female and male perception and reaction to maternal and child health projects</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary Survey Report</li> <li>Completion Evaluation Report</li> <li>Situational report on health sector development project</li> <li>Female residents of the region</li> </ul>	<ul style="list-style-type: none"> <li>Literature Investigation</li> <li>Survey</li> <li>Interview</li> </ul>



## III. Evaluation Results

1. Relevance
2. Efficiency
3. Effectiveness
4. Impact
5. Sustainability
6. Cross-cutting Issue (Gender Mainstreaming)





# III

## Evaluation Results



### 1. Relevance

- The Project is highly correspondent to the National Development Strategy as well as to the sectoral development priorities of Guatemala
  - According to the Poverty Reduction Strategy 2004-2007 of the Guatemalan Government, (Estrategia de Reduccion de la Pobreza 2004-2007) “improvement of health environment (infant protection, vaccine increase, health service enhancement, budget expansion)” is one of the investment factors for human capital development.
  - Moreover, reducing maternal and infant mortality is a top priority of health sector of Guatemala, that the Guatemalan Government has enacted the Law of Social Development (Ley de Desarrollo Social) in 2001 to improve its poor maternal and child health situation.
  - To the questions, “Do you think the Project matches the needs of your country?”, “Do you think the Project corresponds with your national health system and related policies?”, and “Do you think the health services provided by CH and PMCHC meet the local demands?”, all respondents from the Guatemalan Ministry of Health and Social Affairs gave positive answers.

- The Project corresponds with the ODA policy and country partnership strategy of Korea as well as with the health sector policy of KOICA.
  - KOICA’s “Country Assistance Strategy (CAS) for Guatemala 2008-2010” was established and implemented since 2007; and the “Health Sector Strategy 2011-2015” of KOICA has been established and implemented since 2010. Thus, it is unlikely that the Project was designed upon a consideration on those strategies.
  - However, while the Project was in its planning stage, Guatemala was selected as one of the main partner countries for Korean ODA; and the Project became a focal point of health projects in Guatemala reflecting KOICA’s CAS for Guatemala since 2008. Therefore, the Project is highly relevant to the strategies of both the Korean Government and KOICA.
- The project goal is relevant to the achievement of MDGs.
  - The goal of the Project is reducing maternal and infant mortality rate through capacity building for maternal and child health services in Chimaltenango. The goal is highly relevant to MDG 4, reduced child mortality rate, and MDG 5, improved maternal health. Hence the Project contributes to achieving the MDGs.
- The Project lacks harmony with the maternal and child health projects of other aid agencies.
  - The health sector of Guatemala is a focus area for most donor countries. Bilateral aid agencies including United States Agency for International Development (USAID), Japan International Cooperation Agency (JICA), and Agencia Espanola de Cooperacion Internacional para el Desarrollo (AECID) have longer histories of implementing large scale projects in the sector than Korea has.

- However, KOICA does not seem to be learning much from the experiences of other donor countries. The lessons and implications from the experiences of advanced donor countries are as follows:
  - USAID designates a single sector, but supports an extensive target area. AECID, in contrast, designates a small scale target area, but provides a comprehensive support over a number of sectors. Project strategies should be established, therefore, upon a consideration on both USAID and AECID approaches.
  - More time and effort should be invested to improving the communication with the ODA institution of the recipient country, and to conducting visiting research.
  - The role of sector specialists should be recognized, and be well allocated in each project site.
  
- The process of reflecting the opinions of the recipient country and the beneficiaries in the project planning stage was appropriate.
  
- The process of reflecting the opinions, as displayed in a cooperation request for the Project is as follows:
  - The Public Nursing College is designated as the training institution, reflecting the opinion of the Guatemalan Ministry of Health and Social Affairs.
  - The main parties concerned are KOICA (in cooperation with its overseas office) and the Public Nursing College of Guatemala. A Korean PMC and the Guatemalan Ministry of Health and Social Affairs can also participate in the contract when necessary.
  
- An intention to reflect the opinions, as displayed in the project implementation plan of Inje University is as follows:
  - The details of the curriculum will be decided upon a discussion with the Public Nursing College of Guatemala after investigating the requests of the Guatemalan Ministry of Health and Social Affairs and the level of the trainees.
  - The Guatemalan Ministry of Health and Social Affairs, KOICA's Guatemala Office, Chimaltenango Board of Health, Chimaltenango Hospital and Patzun Public Clinic,

and the Public Nursing College of Guatemala will all be consulted upon for the monitoring and evaluation of the Project.

□ The target area was selected after intensive discussions with the recipient government.

○ According to the existing reports, the Guatemalan Ministry of Health and Social Affairs nominated 3 target areas to the investigation team of Korea. After conducting a preliminary investigation, the team selected Chimaltenango and Patzun as the ideal nominees, and reported back to the Ministry of Health and Social Affairs. Hence, the Project's target area was selected after a sufficient consultation with the recipient government.

□ The newly developed antenatal care service matches the demand of the mothers.

- To a survey asking “do you think the health service provided by Chimaltenango Maternal and Child Health Center (CMCHC)/ Patzun Public Clinic (PPC) are relevant to the local demand?”, 67%(out of 15 respondents) of the users of CMCHC and 94.2%(out of 35 respondents) of the users of PPC provided positive answers.



## 2. Efficiency

- Not all resources were injected in a timely manner to maximize cost efficiency. However, overall implementation of project activities was in line with the plan and schedule.
  - Remodeling of CMCHC and PPC was necessary due to poor construction. The remodeling was as costly as initial construction; and the opening of the facilities was delayed as the consequence.
  - To a survey question asking “Were the project activities implemented in line with the planned schedule?”, 82.6% of the respondents from CMCHC and 90% of the respondents from PPC gave positive answers.
  - 89% (out of 43 respondents) of the midwives in Chimaltenango (the beneficiaries of capacity building) responded that the training program was conducted according to the plan.
  
- The Project’s outcomes relative to inputs were inefficient compared to the similar projects implemented by KOICA.
  - The Project failed to predict and manage the increase of construction materials cost during the stages of preliminary investigation and implementation discussion. Such a failure caused the budget gap, thereby causing poor design and construction.
  - Especially in the case of CMCHC, the spaces allocated for emergency room and intensive care unit were insufficient. KOICA’s health projects are generally supervised by PMC with regards to the space program, basic design, implementation design, and approval of design. However, the Project seemed to have lacked a cooperation among CM, designer, and PMC.



- The division of roles and the communication process among some stakeholders of the Project (PMC, local healthcare providers, staff) were efficient, but the CM and other stakeholders had insufficient communication among them.
- A person from Inje University said that they maintained a favorable relationship with the Public Nursing College. The Dean of the university had a special passion for the Project and actively supported the Project.
- To the survey question asking “were the division of roles and communication system efficient among the stakeholders? (PMC-local healthcare providers-staff)”, 69.6% (out of 23 respondents) of the respondents from CMCHC and 50% (out of 10 respondents) of the respondents from PPC provided positive answers. (refer to the survey results in the appendix)
- On the other hand, cooperation between the PMC and the CM was inefficient as they were contracted to KOICA from separate orderings.
- Also, the CM was responsible even for the design, so not a single problem in the quality of design and construction was reported until 70% of the entire construction was finished. Consequently, a completion approval was granted to the building with possible defects.
- The CM, Cosmopolitan, had limited participation in construction budget and space program as the basic design was processed by the Guatemalan Ministry of Health and Social Affairs. However, considering that the CM failed to reduce the area and to secure additional budget, the CM was inefficient in making adjustments.
- A bilateral communication channel was not properly established to reflect the opinions of the hospital staff regarding the design and construction processes of hospital remodeling.

- CMCHC: For a reconstruction, the PMC and equipment supplier should confirm the completion of the building. However, no appropriate division of role and communication took place, so electrical voltage stabilizers were not installed, and relevant training for technicians and hospital staff was not provided.
  - PPC: According to the head of PPC, the remodeling was processed only upon the agreements among KOICA, the designer and the Ministry of Health and Social Affairs without participation of any hospital personnel. As the result, PPC did not know that lead was not installed in the radiation room, and was then only informed from the Ministry of Health and Social Affairs not to use the radiation room.
- A policy change for ODA allocation in the Guatemalan Government and replacements of relevant officials in the Ministry of Health and Social Affairs served as a structural constraint to efficiency.
- Execution of budget was delayed due to the government's change in ODA allocation policy, deteriorating the efficiency of project implementation.
  - Due to a change of regime in Guatemala, contact persons in the government were replaced, delaying the establishment of infrastructure and the placement of healthcare providers to the health center.



### 3. Effectiveness

#### □ Conformity of the project plan and actual output

##### (1) Installation and utilization of maternal and child health facility and equipments

- After the remodeling, the CMCHC was enabled to function as a hospital. However, a number of problems were observed from the initial design as well as from insufficiency of equipments and relevant training.
  - Due to the nature of obstetrics, many patients come to the hospital through the emergency room. However, the number of patient beds (3 patient beds, 1 of which is for critical patients only) in the emergency room is insufficient.
  - The X-ray room is not being used due to insufficient lead treatment on the inner wall and to lack of X-ray equipments.
  - An automatic sink is not installed, so a kitchen sink is being used for the healthcare providers to wash their hands before surgeries. This increases the risk of infection, putting mothers and infants to a danger.
- Insufficient equipments, training, and localization has caused a number of problems in CMCHC.
  - The construction cost exceeded the budget that the equipments were not provided as planned.
  - The equipments for the treatment of critical neonatal infants were insufficiently provided; and the vaginal probe, which is vital for obstetric examinations was not provided.
  - Reagent was not purchased due to budget insufficiency, so the equipments for blood and urine examination are not being used.
  - The electric voltage stabilizers are not being used after purchase, because training on installation and utilization was not provided for the local technicians and

- hospital staff. As a result, some electric equipments for patient monitoring are broken due to unstabilized electricity.
- The astral lamp in one operating room is not working, so one of the operating room lost its purpose.
  - The provided equipments are different from the equipments that are frequently used in the local environment, so they are hard to be maintained.
- The public clinics that do not have capacity for maternal and child healthcare transfer mothers to PPC for delivery. However, PPC's number of treatments and deliveries (25-30 per month) as well as its rate of utilization is too low considering the scale of the clinic.
- A year has passed since the opening of the clinic, but the local residents are hardly aware of the existence of PPC. The clinic has launched publicity activities, but is seeing little impact.
  - The current head of PPC is a close acquaintance of the head of regional board of health, and is making little effort for publicity activities. He is also in a conflict with an administrative staff of the clinic.
  - PPC is not very distant from CMCHC, and there is another public clinic in the city of Patzun, forming a competitive composition with PPC. Such a competition is another reason why the awareness and the utilization levels of PPC is low.
  - The midwives in Chimaltenango and Patzun are reluctant to bring the mothers to the hospital, anticipating that they might lose their source of income. Such a culture is another factor hindering the utilization of PPC.
  - Only 1 among the 4 doctors working in PPC is an obstetrician; and no nurses in the clinic have a specialty in obstetrics. Hence, the reputation of the clinic meets a constraint from lack of specialized staff.
- Moreover, the equipments provided to PPC are not being used efficiently.
- Equipments for operations are provided to PPC, which does not even have an operating room. A respirator for critical neonatal patients is also irrelevant to PPC, so is left idle.

(2) The impact of the capacity building program for healthcare providers (nurses and midwives)

- Based on the surveys and the interviews, most beneficiaries of the program provided positive feedbacks regarding the contents, location, and time frame of the program. However, some trainees reported that some contents of the training lacked direct relevance to their works. Hence, program design and trainee selection may need to be more consistent to the purpose; and a continuous monitoring on the application of the training may be necessary.
- The results of the survey conducted to the midwives in Chimaltenango who benefitted from the capacity building program are as follows:<sup>1)</sup>

<Table 3> Survey results for the midwives in Chimaltenango who benefitted from the capacity building program

Unit : (%)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	No Answer
Appropriateness of the venue	0.0	0.0	0.0	7.0	88.4	4.7
Appropriateness of the timeframe	2.3	4.7	9.3	44.2	34.9	4.7
Conformity of training contents and actual work	34.9	7.0	0.0	2.3	51.2	4.7
Effectiveness of equipment utilization training	37.2	2.3	2.3	9.3	25.6	23.3
Appropriateness of the level of training contents	4.7	18.6	11.6	20.9	39.5	4.7
Degree of utilization of skills learned	2.3	0.0	2.3	9.3	83.7	2.3

1) Total of 43 respondents. Survey papers to the nurses were distributed but not collected

- The rate of antenatal care and delivery attended by trained nurses has increased after the capacity building for nurses.
- The midwives were satisfied with the capacity building program as the teaching materials were suitable to their level. They were able to gain crisis management ability and understanding about delivery in health facilities.
- The trainees were especially motivated by the session led by the Korean specialist (nursing professor) where Korean experience was shared. However, a couple of trainees reported that some contents of the training lacked direct relevance to their works.

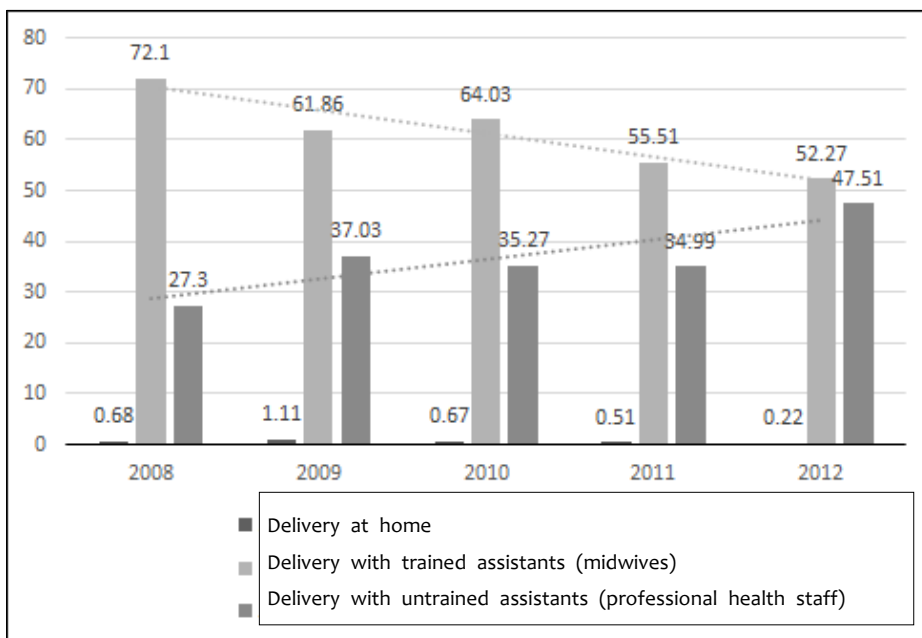
### (3) Development of antenatal care project and educational materials

- According to the survey on the central role of CMCHC and PPC, most patients and healthcare providers selected antenatal care education as the key health service.
  - CMCHC: 81% of the patients , 50% of the healthcare providers
  - PPC: 76% of the patients, 75% of the healthcare providers
- Nonetheless, the staff of both CMCHC and PPC are not giving high regards to training the midwives, so additional effort is needed to improve the stakeholders' understanding on the role of midwives in maternal and child health services.
- The educational materials for the midwives were developed mostly with pictures and easily conveyed messages considering the level of education of the midwives. However, the quality and design of the publicized materials were not quite high.

□ Conformity of project plan and the initial outcomes

(1) Increase in the number of delivery in health facilities (Number of delivery in CMCHC and PPC)

<Image 1> Changes in the rate of deliveries at home, deliveries attended by untrained health workers (midwives), and deliveries in health facilities (attended by trained healthcare providers)



Source: CMCHC statistics

○ Since the establishment of CMCHC and PPC, the rate of deliveries in health facilities (attended by doctors) increased from 35.3% in 2010 to 47.5% in 2012. The rate of deliveries attended by untrained health workers (midwives) decreased by about 10% from 64.03% to 52.3% in the same period. Looking at such a trend, the Project does seem to have made a contribution to increasing the rate of deliveries attended by professional healthcare providers.

<Table 4> Number of Medical Treatments in PPC

	2011	2012	2013 (Jan-Jun)
Antenatal Treatments	1228	2141	1518
Deliveries	284	300	171
Number of Transferred Patients	209	307	228

Source: PPC

- The number of antenatal treatments and deliveries in health facilities are increasing every year. Transfer of patients are also taking place between maternal and child health clinic and the state hospital, fulfilling the objective of the Project.
- The number of patient transfers by midwives cannot be analysed objectively as there are no relevant statistics. According to the interviews with the head of hospital and the nurses, however, an increasing number of patients are being transferred to health facilities by the hands of the midwives.
- The Chimaltenango Hospital limits the access of midwives into the hospital. This might serve as a constraint when the midwives transfer the patients to health facilities.
- Another significant constraint to the transfer of patients lies on the financial side. The midwives generally receive a certain amount of money for attending deliveries. Thus, they are reluctant to transfer the mothers to health facilities, anticipating the loss of their source of income.

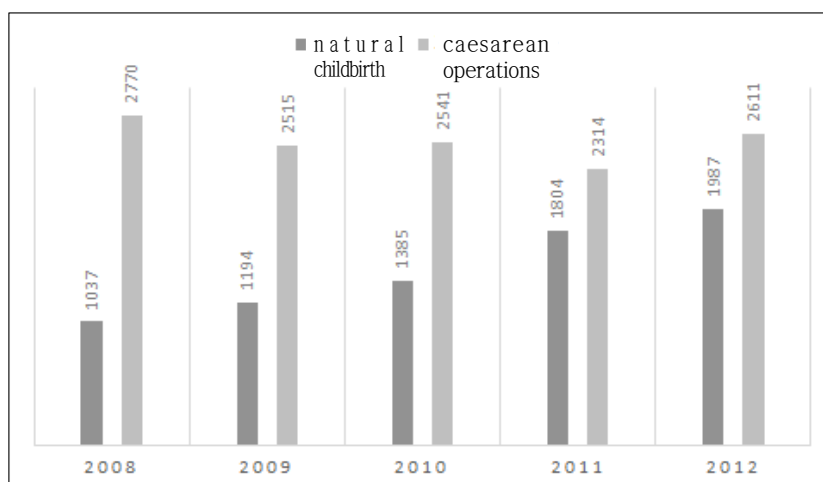


## (2) Increase in the number of trained maternal and child healthcare providers

- There are no documents or statistics on the increase in the number of trained maternal and child healthcare providers. Nonetheless, trained nurses are detecting and transferring high risk mothers to health facilities, implying that the Project did make an impact.
- Since the establishment of CMCHC, deliveries attended by nurses decreased from 47% to 15%, while deliveries attended by doctors increased from 75% to 86%. The reasons why deliveries attended by nurses decreased are because deliveries attended by doctors has increased, and because the nurses trained from the capacity building program were not placed in the relevant fields due to inadequate plans for the placement of trained labor force.

## (3) Establishment of an operation system for mothers

<Image 2> Number of Natural Childbirths and Caesarean Operations in the Chimaltenango Hospital



Source: The Chimaltenango Hospital

- Since 2010, total number of deliveries in CMCHC has increased. The increase in the number of caesarean operations was a double of the increase in the number of natural childbirth. The trend was affected partially by the increase in overall birth rate of Chimaltenango; and the trend implies that the establishment of CMCHC effectively met the local demand in Chimaltenango. The increase in the number of caesarean operations also reflects that an increasing number of high risk mothers are using the service of CMCHC, and that the maternal and child health service in the region has improved technically.
- A strategy to improve the management effectiveness of CMCHC and PPC has not been established.
- In PPC, a slight emotional tention was detected between the director and administrative staff, hindering an effective management of the facility.



#### **4. Impact**

- The number of patients using CMCHC and PPC has increased, but a continuous observation is needed to track the Project's impact on improving the maternal and child health environment of Guatemala.
- According to the PMC, the patients find the health service more satisfying and enhanced after the establishment of the center. Also, the frequency of using health facilities for childbirth has increased by 4 times in Patzun, since the establishment of PPC.
- To the survey question asking “do you think the Project made a positive

impact on the improvement of maternal and child health environment in your region?”, 95.6% (out of 23 respondents) of the CMCHC staff and 100% (out of 15 respondents) of PPC staff responded positively. 73.3% (out of 15 respondents) of the patients using CMCHC and 80% (out of 35 respondents) of the patients using PPC also provided positive responses.

- The construction of maternal and child health center and other support elements made an impact on the improvement of the hospital’s health service both quantitatively and qualitatively, specifically enhancing the elements belonging to the 3rd phase of the delay model.<sup>2)</sup>

<Table 5> Birth, Maternal Death, Infant Death, and Neonatal Death Rates of Chimaltenango

	2008	2009	2010	2011	2012
Total Population	562,557	578,977	595,767	612,973	630,612
Birth Rate	5.9%	5.8%	11%	8.2%	10%
Neonatal Death Rate	15.37%	12.22%	18.61%	27.52%	24.24%
Infant Death Rate	4.72%	3.81%	5.35%	7.65%	7.66%
Maternal Death Rate	8.7%	3.4%	7.6%	6.4%	8.7%
Ratio of Using Contraception	35%	53%	35%	53%	54%

Source: CMCHC Statistics <sup>3)</sup>

- The maternal death rate in Chimaltenango does not show much improvement since the establishment of CMCHC, but rather has increased

2) Phase 1: Decision to seek care

Phase 2: Identifying and reaching medical facility

Phase 3: Receipt of adequate and appropriate treatment

3) Generally, WHO indicators are expressed in ratio per 100,000. In Guatemala, however, the indicators are expressed in percentage

compared to 2009. The infant and neonatal death rates have also increased, possibly because of the increase in total birth rate, though the absolute reason for the trend cannot be clarified. Hence, such a trend alone does not imply that the establishment of CMCHC and PPC made no possible impact.

- The recognition on maternal and child health is improving in Guatemala, but a continuous effort is necessary.
  - Independent maternal and child health centers were established in Chimaltenango and Patzún, and recognition on maternal and child health has followed through the capacity building program, securing visibility for Korean aid.
  - To continuously improve the recognition on maternal and child health, regional and community level programs should be actively implemented, considering the geographical characteristics of Guatemala. An effort for recognition improvement should be continued through capacity building programs for maternal and child health.
- Health projects are likely to be expanded to related sectors.
  - The structure and contents of the Project is highly relevant to the health policy and environment of Guatemala. Thus, it can make more effective approaches to other regions in a similar situation with Chimaltenango.
  - Based on the experiences learned through the Project, a maternal and child health center has been initiated in Huehuetenango. A consortium of a CM and a designer from Korea was selected to take charge of space program, construction design, and equipment organization as a sector specialist.



## 5. Sustainability

- The management structure of the health facilities should be improved for the sustainability of the Project's impact.
  - The health facilities are in a need of additional management support.
    - The supported equipments are not fully utilized, and CMCHC lacks skills for managing a general hospital. Hence a solution to increase the utility and management efficiency of the health facilities is necessary.
    - Providing a direct supervision by dispatching management staff to CMCHC and PPC may be considered.
  
- The technical and financial capacity to manage and maintain the maternal and child health facilities is insufficient.
  - Localization of medical equipments and training for equipment utilization did not take place, hindering a sustainable management of maternal and child health facilities.
  - Both CMCHC and PPC are suffering from a shortage of healthcare providers.
  - Legal regulations serve as a constraint to adequately utilizing the facilities.
    - The PPC cannot provide meals to the patients as there is a regulation that meals cannot be provided without a supervision of dietitian. The cafeteria of the clinic is now only used for simple purposes such as heating packed foods.
  
- The systems of CMCHC and PPC lack linkage to each other.
  - The roles are divided that PPC takes charge of natural/ordinary deliveries, while high risk mothers who require operation are to be transferred to CMCHC.

- However, the two facilities are close to each other, so patients tend to be concentrated to CMCHC, creating a regional imbalance of supply and demand of health services.
- The Guatemalan Government needs to establish a specific plan to support the overall enhancement of the nation's maternal and child health.
- The survey respondents from the Ministry of Health and Social Affairs said that the ministry has a plan to support a sustainable management of the facilities. In fact, however, no specific plan exists about the finance and labor to maintain CMCHC and PPC.
- Even when some plans exist, the plans are hardly implemented. CMCHC had an initial plan of hiring eight(8) obstetricians, but only six(6) are working in the center at the moment; and remaining two(2) are working as the director and assistant director of the center mainly carrying administrative works rather than dealing with patients. A shortage of specialized doctor is another constraint to providing health services suitable for the scale and demand of the hospital.
- A careful research and strategic approach are necessary to harmonize the antenatal care system and the sociocultural conditions of Guatemala.
- No documents were found about the level of antenatal care in Guatemala. Though the rate of delivery attended by trained healthcare providers is increasing, over 50% of the total childbirths are still attended by midwives. Hence, a research on the strategies to strengthen the incentives for the midwives should follow.



## **6. Cross-cutting Issue (Gender Mainstreaming)**

- Strategies for gender mainstreaming were established in the project designing stage.
  - The Project was designed to reduce the maternal and infant mortality rates through a capacity building for maternal and child health service in Chimaltenango. The Project aimed to create a safe delivery environment for the mothers in Chimaltenango, and expand an antenatal care service.
- The Project made a positive impact on social capacity building for female healthcare providers in Guatemala.
  - To the survey question asking “do you think the quality of lives of women has improved through the Project?”, the entire staff and healthcare providers from both CMCHC (23 respondents) and PPC (10 respondents) provided positive responses.
  - A same survey was conducted to 15 users of CMCHC and 35 users of PPC; and the percentage of the respondents with positive answers was as high as 93.3% and 94.2% respectively.
- The Project positively affected the beneficiaries’ gender relationships and gender equality.
  - To a survey question asking “do you think the Project contributed to promoting gender equality in the region?”, 95.7% (out of 23 respondents) of the staff and healthcare providers of CMCHC and 100% (out of 10 respondents) of the staff and healthcare providers of PPC provided positive answers.
  - A same survey was conducted to 15 users of CMCHC and 35 users of PPC; and the percentage of the respondents with positive answers was as high as 100% and 85.7% respectively.



## IV. Conclusion and Recommendation

1. Main evaluation results and lessons
2. Project-related recommendations (for sector/country)
3. Policy Recommendation





# IV Conclusion and Recommendation



## 1. Main evaluation results and lessons

- The Project generally contributed to reducing the maternal death rate in the target area, but a number of constraints to project effectiveness were found.
- The initial design and construction were ineffective due to budget insufficiency, but the problems were mostly solved through the remodeling. In the future projects, sufficient budget must be secured, and the basic/implementing design should be supervised by a Korean company in a partnership with a recipient institution.
- In CMCHC, some facilities and equipments are still not in function due to insufficient training, impossible access to medicines in the local market, and constructional defect. In PPC, the number of patients using the clinic is still very few, hindering an effective support to the clinic. Also, the remodeling was processed only upon the agreement among KOICA, the designer and the Ministry of Health and Social Affairs that a channel to reflect the opinions of the hospital staff was insufficient.
- The overall sustainability of the Project is low. Problems occur with regards to a mismatch between construction and equipment, lack of training for the utilization of equipments, low utility of expensive equipments, and an absence of appropriate manuals. Hence, localization of equipments as well as a comprehensive training for equipment utilization would be necessary.



## **2. Project-related recommendations (for sector/country)**

- A local company in Guatemala carried the roles of both the designer and the CM, losing the function of mutual checking. A hospital building tends to involve more risks in terms of construction budget than ordinary buildings, because more gaps occur in construction environment and electric work for equipments. Therefore, it is recommended that a designer and a CM with a specialty in hospital construction form a consortium and jointly take charge of the construction design.
- A process reform is needed so that the PMC and the CM participate in both basic and implementing planning. The basic design should be done in close cooperation with the PMC and the CM, later acquiring the confirmation of the recipient country. The implementing design should be carried by a company with a sufficient local knowledge selected by the CM.
- For remodeling, unexpected problems often occur, so a sufficient amount of budget should be allocated as a reserve fund. A confirmation process is necessary for the PMC and the equipment supplier to approve of the completion of remodeling following a poor construction.
- The remodeling was done by a qualified company, solving most of the initial problems. However, the unused X-ray room, the broken astral lamp in an operating room, and the absence of automatic sink for the operating rooms are the problems requiring an urgent action. Thus, the designer for the reconstruction, the CM, and the construction company should examine those problems and take necessary actions using the reserve fund, based on a consultation with the relevant specialists.
- When providing equipments, the equipments that are suitable for the level

of the recipient country and are available in the local market should be selected. A continuous assistance should be provided as well for the maintenance of the supported equipments.

- The Project aimed to create a safe delivery environment for the mothers in Chimaltenango, and to expand the antenatal care service. The establishment and support elements of CMCHC and PPC correspond to the health service system of Guatemala. Nonetheless, PPC would have operated more effectively if its geographical access was considered and the then existing Patzun Public Clinic was expanded with a maternal and child healthcare function rather than being newly constructed.
- To comprehend the local situation and provide relevant consulting, it is recommended that a health specialist (consultant) be dispatched for about 2 years.
  - CMCHC and PPC need administrative and management support. Possible solutions would be a dispatch of senior experts/cooperative doctors/health specialists who have a know-how in hospital management, a cooperative project with universities, and a global CSR project.
  - Maternal and child health of Guatemala is one of the poorest in Latin America; and is in need for health facilities, healthcare providers, and institutional development. Hence, in the future projects, development of health system and institutions should be considered as well as enhancement of health facilities and equipments and workforce training.
  - Moreover, to maximize the impact of the capacity building project for nurses and midwives, continuous monitoring and evaluation should be conducted on whether the trained workforce are effectively utilized. Monitoring and evaluation were requested by the recipient government as well, and both institutional and technical approaches should be considered. Thus, a health specialist dispatch can serve as a cooperative project.

- The training program, for instance, should be implemented mainly to the workers who will stay at least for 3 years in Chimaltenango Hospital to establish an effective system with a consideration on the hospital's purpose and achievements.
- The problems that require urgent actions are as follows:
  - Installation of automatic sink for operating rooms, repair of operating room facilities including the astral lamps, establishment of a waiting area for the families of the patients, and repair of the X-ray room facilities.



### **3. Policy Recommendation**

- Hospital construction and equipment provision require a massive input of cost and effort. However, such a project can easily turn ineffective when sustainability is not ensured. Hence, an exit plan and a specific maintenance plan should be established as early as when discussing about an initial project design with the recipient country.
- A development of the workforce which can provide effective health services using the supported facilities and equipments is a prerequisite for health projects. Hence, the Project was ideal as it involved a capacity building program for the healthcare providers as well. Nonetheless, the role of developed workforce in the recipient country's health system should be carefully considered.
  - Midwives are actually taking a significant role in childbirth in Chimaltenango, but they are not included in the official healthcare frame. Hence, a research project to develop a system to manage and evaluate the quality of health service provided by the midwives need to be implemented as well.
  - An utilization plan including the workplace, duties, and positions of the trained workforce should be specified in the planning stage.

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**Ex-post Evaluation Report on the Program for the Improvement of  
Maternal and Child Health in Chimaltenango**

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