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LPP-Matching Grant Program
Performance and Evaluation Report
Dasmariñas, Cavite
Philippines

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SUMMARY

The Department of Health, with the support of the United States Agency for International Development (USAID) and technical assistance from the Management Sciences for Health (MSH) implemented the LPP-Matching Grant Program (MGP).[1] FRONTIERS Manila staff carried out two phases of the LPP-Matching Grant Program Evaluation Study, the program performance and impact evaluation. The program performance evaluation was conducted in four Local Government Units (LGUs)[2] from June 1999 to March 2000, of which Dasmariñas is part. The objectives are twofold: Firstly, to evaluate the relative effectiveness of various interventions funded by the MGP for reaching under-served and high-risk population with needed services; and secondly, to provide immediate feedback to improve program implementation. Greater impact and expansion of service delivery is expected in four areas: (1) increased coverage for fully immunized children (FIC), (2) vitamin A supplementation (VAC), (3) tetanus toxoid two plus (TT2+) for women, (4) and increased use of modern contraception (CPR) and reducing unmet need for family planning. Adopting the "input-process-output-outcome" framework, the study used program-based data through careful monitoring of activities, focusing on the inputs, processes and outputs.

Population growth rate in Dasmariñas has been explosive at 18.43 percent (1999). The erratic population growth since 1980 is related to patterns of urban resettlement and rapid economic development in the mid-1990s. Many women are transient and mobile. Majority of women in need of services work in factories and cannot access health centers during regular clinic schedules. Poor performance on TT2+ and CPR are attributed to both client and facility related factors. Of all the service delivery areas, the MGP plan focused on improving TT2+ and family planning services. Activities were designed to carefully track the city's large, mobile population through masterlisting (CBMIS), optimize existing personnel for TT2+ during EPI regular schedules, home and industrial site visits for TT2+, training of traditional birth attendants (TBAs) on aseptic techniques

and TT2+ and FP referrals, and provision of IUD kits and equipment for BHSs with trained midwives and escort services for potential BTL clients.

Dasmariñas was granted an MGP allocation of PhP400,000 (appx. US$10,000). It was the demonstration site for a number of important activities. Implementation of MGP activities started in August 1999, with a mass TT2+ campaign. CBMIS data revealed that immunization of women in industrial sites contributed 24.5 percent to the total number of immunized women of reproductive age. Clients for TT2+ increased by a factor of three. *Hilots* were responsible for effective referrals of 4.7 to 8.9 percent of total TT2+ clients and 4.1 to 35.6 percent of total new FP acceptors. With the MGP, Dasmariñas performance on TT2+ helped improve the provincial coverage from 43 percent in 1998 to 61.3 percent in 1999. New family planning acceptors for all methods increased by 10 percent.

Support of the local executive is vitally important for making the Matching Grant Program acceptable to the local government unit. A monitoring mechanism with timely feedback is needed to track implementation of MGP services. Such a mechanism should be designed during the planning phase of the program. Health workers should be given technical assistance for all aspects of the CBMIS, including data gathering, analysis and linkage to service delivery. Making the CBMIS truly community-based may be limited by the capabilities of the BHWs. The interventions focused so much on TT2+ that other services seemed denoted, as reflected in the LGU's MGP statistics. Utilization did not automatically follow provision of IUD equipment to several BHSs. Other strategies should accompany this type of intervention. MGP highlights its fast track mechanisms, but health personnel needed time to plan for more innovative interventions and to become immersed in the new activities. Local health people should realize that more resources are available in the community.

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[1] LPP-Matching Grant Program, an innovative and responsive program for LGUs aimed at expanding service delivery and enhancing quality of care for women and children in the municipalities and component cities of the country.

[2] Four LGUs representing each cluster of the country from the first batch of MGP enrollees.

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ABBREVIATIONS

BCG	- Bacille Calmett Gourain
BHW	- Barangay Health Worker
BHS	- Barangay Health Station
BTL	- Bilateral Tubal Ligation
CBMIS	- Community Based Monitoring and Information System
CHO	- City Health Office
CPR	- Contraceptive Prevalence Rate
DHRFO	- Department of Health Regional Field Office
DPT	- Diphtheria, Pertussis Tetanus
DOH	- Department of Health
FHSIS	- Field Health Services Information System
FIC	- Fully Immunized Child
FP	- Family Planning
GMC	- Growth Monitoring Chart
IUD	- Intra-Uterine Device
LGU	- Local Government Unit
LPP	- LGU Performance Program
MGP	- Matching Grant program
MOA	- Memorandum of Agreement
MOE	- Maintenance and Operation Expenses
MSH	- Management Sciences for Health
MWRA	- Married Women of Reproductive Age
NFP	- Natural Family Planning
NDS	- National Demographic Survey
NGO	- Non-government Organization
NSO	- National Statistics Office
OPV	- Oral Polio Vaccine
PHO	- Provincial Health Office
PMC	- Pre-Marriage Counseling
RHM	- Rural Health Midwife
RHU	- Rural Health Unit
SJDM	- San Jose del Monte
SMDH	- Sta. Maria District Hospital
SPDH	- Sapang Palay District Hospital
TT	- Tetanus Toxoid
TT2+	- Tetanus Toxoid Two Plus
USAID	- United States Agency for International Development
VAC	- Vitamin A Coverage
WRA	- Women of Reproductive Age

ACKNOWLEDGMENTS

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The technical assistance, inputs and cooperation of the field coordinators of Management Sciences for Health (MSH) during fieldwork and consultations are gratefully acknowledged.

The Local Government of Dasmarinas, and the Department of Health Regional Office helped in mobilizing designated point persons during information gathering done by the field evaluator of Population Council. The rural health physicians, nurses, midwives and *barangay* health workers of the RHUs, as well as the local offices and non-government organizations in the municipality, have also been supportive and patient in assisting the field evaluator through data retrieval and in-depth interviews.

Population Council also expresses appreciation to the local officials, program managers and community leaders who extended their hospitality and cooperation in the entire evaluation period of the program.

Lastly, the numerous men and women, who in many ways had been helpful in the process evaluation of the Matching Grant Program, are duly recognized.

I. BACKGROUND

After the implementation of the Local Government Code of 1991, which involved the devolution of national functions to local governments units (LGUs) in the Philippines, weaknesses in the local health situation surfaced. It began posing a challenge to policy makers and program implementers advocating for improved primary health care services. In response to this challenge, a five-year initiative from 1995 to 2000 called the Local Government Performance Program (LPP) was designed and implemented by the Department of Health (DOH) with technical assistance from the Management of Sciences for Health (MSH). The program document describes LPP as intending "to improve the health of mothers and children through increased utilization of family planning and child health (MCH) and nutrition services." LPP Grants were "intended to serve as an incentive, encouraging LGUs to adopt the best practices in distributing commodities, training staff, equipping service delivery sites, providing voluntary sterilization services, and using (IEC)."[1]

After an assessment review of the LPP was undertaken in June 1998, several recommendations were advanced to improve its implementation. The assessment report noted that while the LPP is an effective vehicle for developing LGU management and service delivery capability, some weaknesses and limitations were recognized. The report described the LPP as "highly centralized," "not performance-based" and "not sustainable." Hence, LPP, the report concluded, is not the most appropriate means for achieving impact on health objectives. The report recommended a "follow-on initiative that puts greater emphasis on impact, building on the strengths of the LPP, while overcoming its limitations."

[1] Jack Reynolds, et al, 1998. *Midterm Assessment of Intermediate Result 1 of Strategic Objectives 3* "Increased Public Provision of Family Planning and Maternal and Child Services." POPTECH Report No. 97-127-067.

The Matching Grant Program: The "Follow-On Initiative" of LPP

The above recommendations became the basis for the development by the Management Sciences for Health of the Matching Grant Program (MGP). In contrast to the more general and more directive approach of the LPP to strengthen LGU health programs, the MGP is particularly designed to stimulate the LGUs to focus directly on strengthening service delivery while giving the local government units more latitude in determining their local programs. Consequently, the MGP was designed with the following features:[2]

- Target mid-sized component cities and municipalities, initially those with a population of 100,000 and above where actual primary health care services are provided.
- Employ a "grantee-friendly" application process, with the LGU defining its own goals and program direction.
- Provide flexible funding of up to P 500,000 and access to technical assistance.
- Encourage LGU to increase fund allocation and expenditure for MGP-assisted programs through a "matching" or counterpart funding.

In particular, the MGP aims to achieve impact and expand service delivery in four target areas:

1. Fully immunized children (FIC)
2. Vitamin A supplementation coverage (VAC)
3. Tetanus toxoid two plus (TT2+) coverage for women
4. Use of modern contraception (modern CPR) to reduce unmet need for family planning (FP)

[2] MSH, 2000. "Matching Grant Program (MGP): An Innovative and Responsive Program for Expanding Service Delivery and Enhancing Quality of Care," pp. 1-2.

TT was determined by the MSH in consultation with the USAID Mission – that it is important to build an evaluation component into the MGP to serve two purposes: (1) to document the program implementation and highlight the processes and best practices to guide and refine early MGP implementation, and (2) to assess MGP's impacts on improving the critical reproductive health programs of local governments. Hence, upon the request of the USAID Mission, FRONTIERS Philippines conducted an evaluation study of the newly launched MGP in February 1999.

Objectives of the MGP Evaluation Study

The overall goal of the study is to inform policy makers in regards to the MGP, particularly in terms of its effectiveness as a mechanism for strengthening local government health programs, especially in the areas of:

- Reproductive health and family planning
- Maternal and child immunization
- Micro-nutrient deficiency prevention

The specific objectives of the study are the following:

- To evaluate the different strategies of MGP for reaching under-served and high-risk population with specific service needs, and
- To evaluate evidence of direct impacts in selected LGUs, as measured by the level of performance relative to critical program areas such as: FP use. immunization (FIC and TT2) and Vitamin A supplementation.

Research Design

The conceptual framework used for evaluating the MGP's performance followed the "input-process-output-outcome" model as represented in Figure 1.

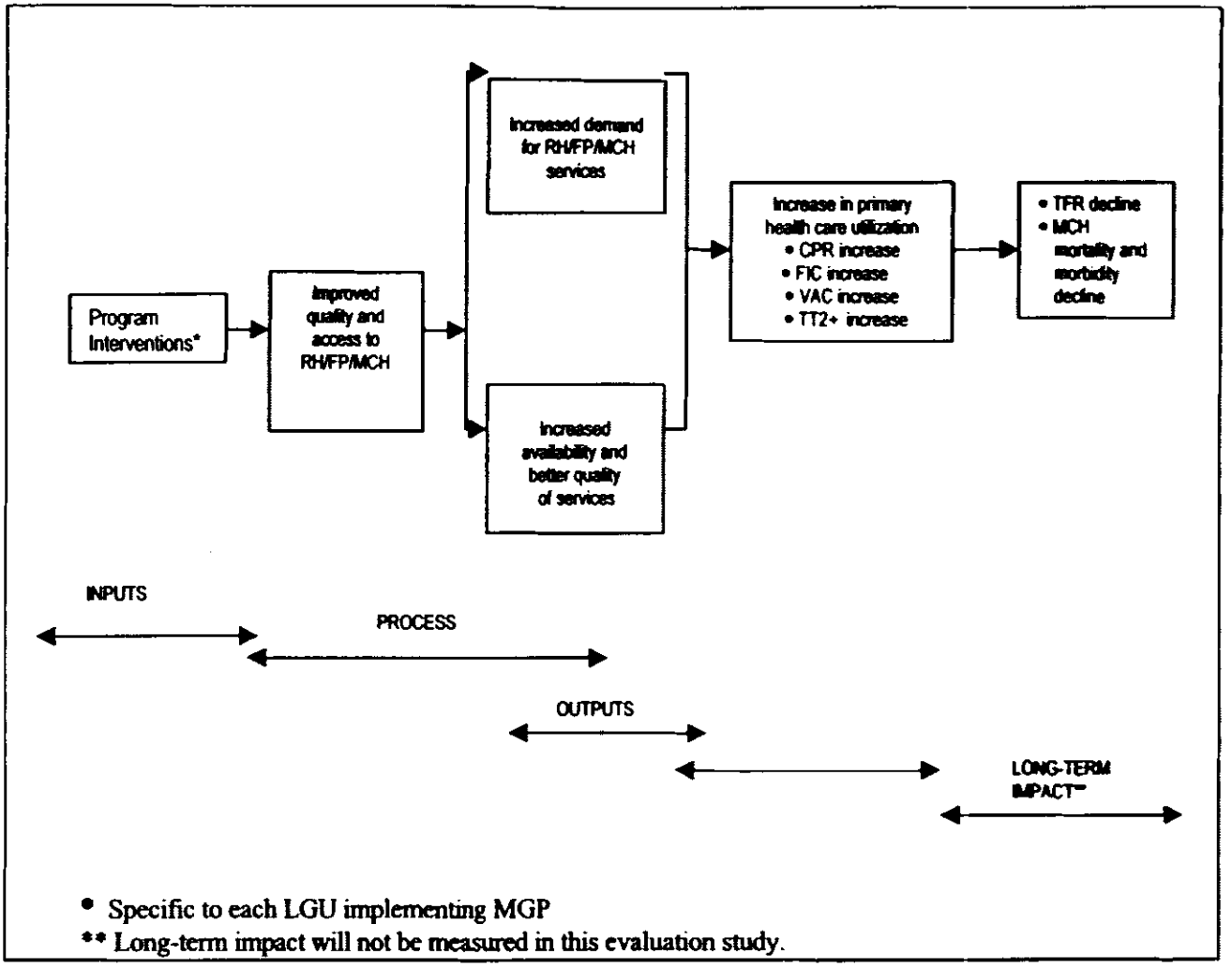

Figure 1. Conceptual framework showing links of the program components to the outcome indicators, and the different categories of evaluation indicators

Phase 1 of the MGP evaluation was planned to provide inputs to the development of the MGP itself. As a new approach of providing resources and technical assistance to LGUs, it is important to provide detailed feedback on the processes and mechanisms that evolve early in the project life. Hence Phase 1 constitutes basically a monitoring and evaluation activity.

Phase I: Process and Performance Evaluation

The Study Sites. Four LGUs sites from the first batch of 12 MGP recruits were selected for evaluation in June 1999. However, because two of the first 12 were not ready by June to be part of the process documentation, the site selection was really made only from 10 initial MGP recruits. The bases for selecting the first four are as follows: 1) one LGU would be selected for each of the operating clusters[3] set up by MSH, 2) the work plans of the selected LGUs must contain a suitable mix of activities/ interventions that are expected to contribute to the four outcomes of interest, and 3) consideration was given to LGUs whose work plan contains innovations or unique approaches that could contribute to the MGP.

With these considerations, the following LGUs were selected for evaluation under Phase 1:

PROCESS PERFORMANCE EVALUATION SITES

1. San Jose Del Monte, Bulacan-----Cluster A
2. Dasmarinas, Cavite----------Cluster B
3. Tacloban, Leyte----------Cluster C
4. Digos, Davao del Sur----------Cluster D

Research Methodology. MGP activities in these four selected sites were observed, measured on a regular basis whether program activities were being implemented according to plan and assessed on how well these program activities were performed and utilized. Field observations, informal interviews with stakeholders and analysis of local statistics are sources of information for this phase of the study. While every effort was made to ensure complete documentation of the MGP, there were key activities that were not observed by the field evaluator.[4] In order to address this gap, key informant

[3] The clusters are arbitrary operational divisions of the country set up by MSH, the implementing agency of the DOH for the MGP. Cluster A consists of Regions 1, 2, 3 and CAR; Cluster B has Regions 4, 5 and NCR; Cluster C includes Regions 6, 7, 8 and 9; Cluster D is composed of Regions 10, 11, 12, Caraga and ARMM.

[4] For example, the planning stage for some of the MGP areas was not observed because this occurred before the evaluation study team was organized.

interviews were conducted to elicit information on what exactly happened during the planning activities.

Phase Two: Impact Evaluation

Strictly speaking this phase is an outcome evaluation (Refer to Figure 1). It uses a non-equivalent pretest-posttest control group design for evaluating the more immediate effects or outcomes of MGP program.

Ideally, the selection of the intervention LGUs would have been at random from the second batch of MGP recruits. However, because MSH and the DOH were implementing a "first come, first served" policy for recruiting LGUs, it was not possible to randomize the selection process. The selection of the three intervention LGUs was further limited by two additional factors: 1) the rate at which MGP is being implemented (LGUs who had not yet been oriented and did not have a work plan for conducting a baseline assessment could not be part of the selection process for the impact evaluation), and 2) since the intervention LGU had to have a control LGU from the same province. This precludes the selection of LGUs where all MGP-qualified units of the province have been recruited at the same time, leaving no possible control. In effect, the intervention LGUs were selected mainly because of the availability of a suitable control LGU within their province. All the selected LGUs are Class A cities and municipalities, i.e., they are all in the highest income category classification of the Dept. of Finance. The three sites chosen were Taytay in Luzon, San Carlos in Visayas and Tagum in Mindanao.

Intervention and control LGUs were matched on the following criteria: 1) both come from the same province to control for administrative and other forms of support provided at province level, 2) similar population sizes, 3) same income class, and 4) similar performance indicators on the four outcomes of interest for the MGP (FIC, TT2, VAC and Family Planning). The intervention LGU should not have initiated MGP community activities before the baseline assessment can be made Because of considerable differences in the state of economic development, impact pairs were selected for each of Luzon, Visayas and Mindanao – the three major geographic divisions

of the country. In consideration, the following were the final sites selected for the impact evaluation:

MGP Area	CONTROL
Taytay (Luzon)	Binagonan (Luzon)
San Carlos (Visayas)	Cadiz (Visayas)
Tagum (Mindanao)	Panabo (Mindanao)

It must be noted that the third set of impact sites (Tagum-Panabo) was eventually dropped due to some implementation delays. Only two sets, Taytay-Binagonan and San Carlos-Cadiz were included in Phase 2 of the study. Population surveys and a modified and shortened[5] version of situation analyses were conducted before and after the implementation of the MGP in two sites.

II. THE APPPLICATION PROCESS

Dasmariñas, a class A municipality of Cavite, was one of the first MGP applicants in the Southern Tagalog region (Region IV). After its receipt of the letter of invitation/request for application from the DOH Regional Office in March 1999, a letter of intent (LOI) was submitted by the LGU to the DOH in April 1999. Nine days upon its submission of the LOI, an orientation/planning session was conducted with representatives from MSH, DOH, as well as regional and provincial health offices. The MSH Field Coordinator assisted and facilitated the revisions of the MGP plan.

Service providers in the two RHUs identified problems and interventions addressing health-related problems, which focused on improving TT2+ and family planning services while sustaining performance coverage in child immunization and vitamin A supplementation. Inputs from the regional or provincial levels included such

[5] The client-provider interaction instrument was not used in this study.

policy issues as identifying personnel for training and logistics-related issues, such as how much supplies are needed for certain activities.

The DOH Regional Office eventually reviewed and approved the MGP plan for funding. Dasmariñas was selected as an MGP recipient because of innovations in its plan to include industrial establishments in service delivery and train traditional birth attendants (TBAs) to encourage women to come for family planning and tetanus toxoid immunization. The municipality was considered a demonstration (pilot) site for a number of initial activities such as the program orientation and planning, and the community-based monitoring information system (CBMIS).

It took 95 working days for Dasmariñas to receive its MGP funds from the start of the application process, which is longer than the 75 average working days of the first batch of LGU grantees. Nevertheless, the RHU physician still thought that the process between planning and the receipt of funds was too rapid for implementation of the program. It was also thought that a longer processing period would have given the staff enough time to prepare for new activities.

III. SOCIO-DEMOGRAPHIC AND HEALTH PROFILE OF DASMARIÑAS

Demographic Characteristics

Dasmariñas is one of the rapidly industrializing towns in the province of Cavite (Refer to Map in Appendix A) with an estimated population of 363,083 in 1999. Based on the 1995 census, the annual growth rate is 18.43 percent. The resettlement of urban squatters in Dasmariñas in the '80s and economic development in the '90s may help explain the rapid population growth in Dasmariñas. It is the site of the First Cavite Industrial Estate, which currently is home to more than 50 factories, including electronics, food and garment manufacturers. Another growth factor is related to several

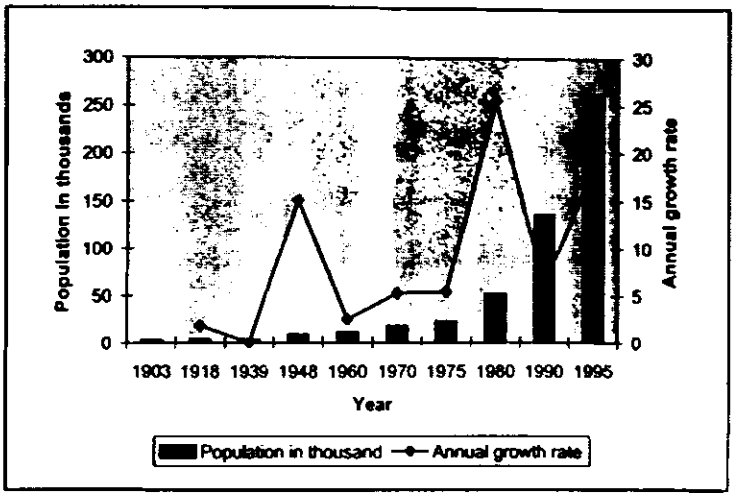

Figure 3. Dasmariñas Population, 1903-1995
Source: NSO

large universities and educational institutions opening in the past decade, which made Dasmariñas the "University Town of Cavite" (refer to Appendix, Table 2). Together, these factors imply higher demands for primary health care services for many women who are relatively mobile. Majority of women needing services work in factories and have no access to services offered by heath facilities during regular clinic schedules. Service providers have difficulty in identifying women who are part of the transient and mobile population.

Health Services Infrastructure

Appendix Table 1 shows the summary of health facilities and resources of the municipality. The Cavite provincial government operates its own municipal hospital. The town supports two Rural Health Units (RHUs) and 74 *Barangay* Health Stations (BHSs) to serve its primary health care needs. Each RHU is independent, having its own staff, facilities and catchment areas. While the midwife-to-population ratio is close to the 1:5000 ratio set by the DOH, the government physician-to-population ratio is far from optimum for both RHUs. The town also has a dearth of BHWs, which the RHU medical doctors attribute to women's preference to work for additional income than to volunteer at the health centers.

About two-thirds of the municipal health budget goes to personnel and the rest is for maintenance and operations (MOOE). Actual expenditures (refer to Appendix, Table 2) show that while funds for personnel are 90 percent utilized, only about half of the MOOE budget was used in 1998. (Refer to Appendix, Tables 4 and 5)

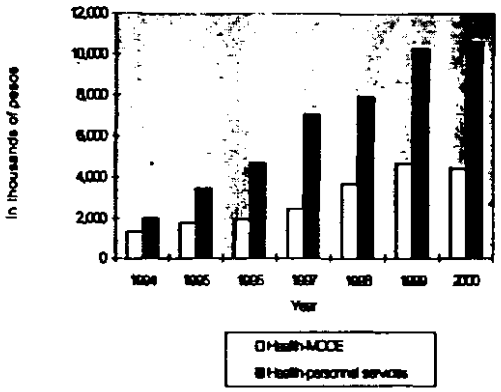

Figure 3. Health Budget of Dasmarinas, Cavite

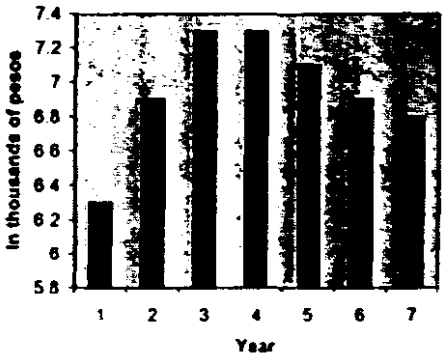

Figure 4. Health Budget as Proportion of LGU Budget

Service Reporting System

The data provided for service provision in the four program areas are facility-based data from the municipal Field Health Service Information System (FHSIS) (See Appendix Table 3). Hence, denominators used to calculate these rates are from population estimates based on national rates of increase. In an area like Dasmariñas, which is growing much faster than the national growth rate, this leads to numerators that far exceed denominators, which leads to problems in data interpretation.

Furthermore, those who can afford private sector services create a dilemma for the Municipal Health Office (MHO) because private practitioners do not report immunization and family planning service statistics. In addition, the MHO can neither ensure the correction of misconceptions nor assist in the provision of appropriate counseling services in the private sector.

IV. MGP PROGRAM

Issues in Study Areas

1. Family Planning

Dasmariñas has suffered from low CPR coverage rates between 1994 and 1998. The highest recorded CPR was in 1994, with 13.5 percent for RHU II and 10.8 percent in RHU I. This relatively low performance may be due to the insufficient supply of IUD kits and equipment for midwives in the BHSs who were trained for IUD insertion. Hence, clients must go to the RHUs for such IUD insertion procedures.

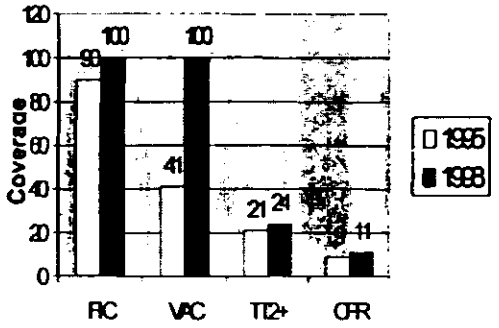

Figure 5a. RHU I Program Indicators, 1995 and 1998
Source : Dasmariñas RHU I

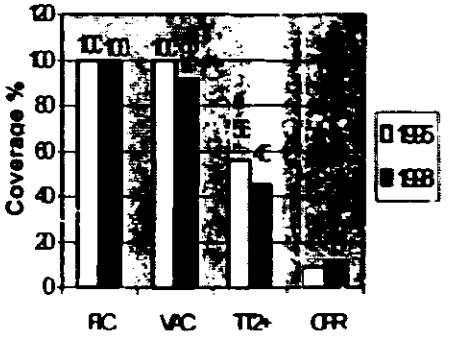

Figure 5b. RHU II Program Indicators, 1995 and 1998
Source : Dasmariñas RHU II

2. Tetanus Toxiod two plus coverage for women

On TT2+ accomplishment, 50 percent in 1994 was the highest recorded in RHU I and the lowest was 21 percent in 1995. RHU II showed a higher coverage rate, ranging from 41 percent in 1996 to 66 percent in 1994.

There are several factors accounting for the low coverage rates for TT2+. First is the misconception that one dose of TT2+ is enough, so mothers did not return for the succeeding doses. Secondly, pregnant mothers consulted the centers for check-up only when they were about to deliver. Thus, they already missed the opportunities for the first

two initial doses. Finally, there is a lack of adequate manpower in the BHSs to provide TT2+ to mothers bringing in their children during the EPI as they are staffed by one midwife.

3. Fully Immunized Children

It is in child immunization that Dasmariñas has near universal coverage, even before the MGP started: RHU II has consistently had 100 percent coverage while RHU I did not fall below the 90 percent mark between 1994 and 1998 (see Figures 4 and 5).

4. Vitamin A Supplementation Coverage

Both RHUs also had good performance in Vitamin A supplementation (refer to Figures 4 and 5). Vitamin A supplementation for 0-to 83-month-old children ranged from 70 to 90 percent for RHU II while RHU I had 100 percent coverage for the years 1994 and 1998. However, the lowest Vitamin A coverage – 25 percent – occurred in 1996.

5. Other Problems with Service Delivery

There were other client-related factors hindering service delivery to eligible women. First is the failure to capture those women who prefer to go to hospitals or private clinics for their pre-natal check-ups. Second is the difficulty in identifying women who are part of the transient and mobile population of the municipality. Finally, with the employment of many eligible women in factories, many are simply unavailable during the health centers' clinic hours.

IV. ACTUAL MGP INTERVENTIONS

1. CBMIS

Realizing the need to keep track of their large and mobile population, as well as their health services needs, the Municipal Health Office (MHO) planned to update

monthly their existing masterlist (TCL) to determine the TT2+, FP and VAC status of women and children and to identify those with unmet needs for services.

2. Improving TT Immunization

- *The BHS EPI Team Approach* (Refer to Appendix, Table 8)

Before the MGP, midwives administered only child immunization during EPI days. With the MGP, nurses were also deployed to cover the BHSs during immunization days to serve mothers bringing their children for their shots, but were themselves also eligible for TT2+.

- *Home Visits to Follow-up TT Defaulters* (Refer to Appendix, Table 9)

Reminders (also referred to as pink letters, referring to paper color on which the letter is printed to match with the pink card (or the Home-based Mother's Record where TT2+ and future appointments for pre-natal care future are recorded) have been sent to pregnant and post-partum women who failed to return for her next appointment. If the woman still failed to come, the midwife pays her a visit at home to give here the next TT dose. This is also an opportunity to correct misconceptions about the sufficiency of one tetanus toxoid immunization shot.

- *Industrial Site Visits for TT2+* (Refer to Appendix, Tables 12, 13)

Letters were sent to factories within the municipality to schedule a nurse to visit the facility. During these visits, the nurse administers TT2+ to eligible women workers. Targeted were companies with a 50-50 male-female employee distribution, except for one or two garments manufacturing sites since they have a mostly female employee population.

3. Improving Family Planning

- *Training of TBAs on aseptic techniques and referral for TT immunization and FP* (Refer to Appendix, Table 14)

The MHO has been providing training for TBAs on aseptic delivery techniques. The MGP emphasized referrals of eligible women for TT2+ and FP services by TBAs to the *barangay* midwife. Assuming that TBAs are closer to women in the community, they may be better motivators for these services. This also fosters closer linkage between the *barangay* wife and TBAs. who may also be BHWs themselves.

- *Provision of IUD equipment to BHSs with trained midwives* (Refer to Appendix, Tables 15 and 16)

Ten midwives who had their training in IUD insertion were given IUD kits to enable them to provide this service at their BHSs. This makes IUD more accessible to clients. Prior to the MGP, IUDs were provided only at the RHUs.

- *Escort Services for Potential VSS clients* (Refer to Appendix, Table 17)

Voluntary surgical sterilization is done only at the municipal hospital, located in Dasmariñas Bagong Bayan (DBB), which is within the area coverage of RHU II. This service is not readily accessible to those residing in the town proper. The MGP provided funds for midwives and BHWs to accompany potential clients to the DBB hospital for BTL.

V. IMPLEMENTATION AND RESULTS

This section describes the inputs and process involved in the implementation of the MGP in Dasmariñas, Cavite by major intervention activity and for each RHU when necessary. Specific human, monetary and in-kind resource inputs of each key stakeholder are summarized in Appendix Table 18, with additional details provided in various proceeding tables of the Indices section. The LPP-Matching Grant Program (MGP) inputs

include resources from the donor agency (USAID), the implementing agency (DOH), key stakeholders of the program, as well as MGP policies and guidelines. Interventions and activities are considered inputs of various processes in the course of the program implementation.

The PhP400,000 MGP grant given to Dasmariñas was divided equally between the two RHUs. Index Table 4 shows how the differences in their preferences were reflected in the distribution of each RHU's budget. For instance, the RHU II physician wanted to have the steel type of examining table, so she charged two of those to the MGP and found other sources to provide the other three tables. The RHU I physician also wanted her BHWs and midwives to receive vests for the masterlisting survey, while the RHU II physician wanted t-shirts and umbrellas. Since the MGP was introduced in the second quarter 1999, the LGU counterpart equivalent to PhP117,900.00 (see Appendix Table 3) was realigned from their budget for the year.

For purposes of the evaluation, process documentation for Dasmariñas was conducted through participant observation and interview of key informants, such as the RHU physician, nurses, midwives and BHWs. Photo documentation was also employed. Outcome measures were obtained from BHS records and collated at the RHU level or at the municipal level when appropriate. There were also occasions when pre-MGP data on performance on some specific activities were obtained for comparison and further analysis. Sources of some pre-MGP data included the PHO for the FHSIS data, the RHUs for accomplishment of previous periods and the Municipal Treasury and/or Accounting Office for the budget information and fund utilization. The process documentation covered a six-month period starting with the implementation of its first key activity in August 1999 and ending in January 2000.

Masterlisting/Case Finding and Provision of Services

Being host to a mobile and transient population, service providers in Dasmariñas decided there was an urgent need for a masterlist of potential health service clients in their catchment areas. This was considered necessary because of the lack of monitoring data to show who already availed of key health services and how many doses were already administered, e.g., TT2+ among those who were already served. (Refer to Appendix Table 10) Masterlisting was also considered as a case-finding activity so that appropriate services could be delivered to an expanded list of identified clients.

This was the most expensive MGP interventions, considering the labor and time needed for its implementation. An advantage, though, is its wide range of applicability because its also addresses other MGP program goals and provides opportunities for delivering other health services.

1. Development of CBMIS Standard Form (See Appendix, Table 11)

The first step in the process involved the development of a standard instrument and training of midwives and BHWs on how the form will be used. "Writeshops" were conducted sometime in mid-August by MSH and Population Council with other LGUs in the first batch of MGP enrollees that indicated interest in including this activity as part of MGP. The purpose of the writeshops was to construct a tool for masterlisting, now termed as the CBMIS. A core group of doctors, nurses, midwives, and some BHWs from both RHUs attended the writeshop on August 30-31, 1999. The writeshop attendees included the MSH Provincial Management and Technical Advisory Team (PMTAT) and the Population Council MGP Evaluation Team. The writeshop was jointly funded by MSH and the LGU. The former provided the supplies used while the latter was responsible for cost of food during the writeshop.

The Legaspi City CBMIS instrument was adopted as a model in Dasmariñas with data on Hepatitis B vaccination included in the immunization record. Other modifications of the Legaspi model instrument are listed below:

1) Another column was added in the WRA table to accommodate the woman's place of work, if she is working. This was to identify potential workplace areas for site visits for TT2+.

2) The high-risk columns were removed and replaced with a single column for Medical Condition.

3) Labeling of the actions taken were changed so that A1, A2, etc., which means Action 1, Action 2, etc., were changed to A1, A2, etc. for actions to be taken for Immunization (Block A); B1, B2, etc. for actions to be taken for Vitamin A supplementation (Block B); and C1, C2, etc., for actions to be taken for Family Planning (Block C).

In RHU I, problems in developing the standard form in collaboration with DLSU's Angelo King Research Center caused some delays. In October 1999, the final version of the form finalized then translated to Tagalog. As of mid-March 2000, masterlisting in RHU I was more than 75% complete. However, there were no Tally Sheets available yet to determine the status of the four target populations for the first round of the CBMIS survey.

For RHU II, the earlier English version of the CBMIS form was used, although it was more difficult to follow. The CBMIS instrument was also modified and condensed to a two-page questionnaire and printed back-to-back, thus reducing its paper requirement (see Appendix H).

2. Pilot Training and Subsequent Trainings

A pilot training on the CBMIS was conducted on September 2, 1999 and facilitated by MSH PMTAT. Twenty four BHWs, six RHMs, and four PHNs from each of the two RHUs participated in the training. The MSH FCs, USAID representative, Population Council MGP Evaluation Team and representatives from the Regional and Provincial Health Offices observed the first CBMIS training in Dasmariñas. Observations of BHWs during the training were as follows:

- They had difficulty administering the English instrument;
- They had difficulty referring to the recommended actions because they were printed on a different page; and
- They need further clarification of what some of the variables and response alternatives meant.

Several levels and versions of CBMIS training were conducted in RHU I (see Table 15). The first two training sessions were on the English version of the CBMIS instrument while the last three sessions were on the standard tools that had been developed by MSH, which was translated to *Tagalog*. MSH also provided technical assistance for the training. On the other hand, pilot training participants from RHU II conducted two batches of echo training for the rest of RHU II midwives prior to the actual data collection.

3. Conduct of CBMIS

Data collection using the CBMIS form started in September 1999 in RHU II and January 2000 in RHU I. The cost of supplies for the actual conduct of the CBMIS in RHU I was provided by the MSH. In RHU II, deploying trained BHWs reduced its training cost. Also employed in RHU II was the "Bayanihan" approach, particularly for large *barangays*. A team of six to eight members (i.e., nurses, midwives, sanitary inspector, clerical staff and utility workers) carried out the CBMIS in densely populated barangays.

From the MGP budget, both RHUs gave non-monetary incentives to service providers who carried out the CBMIS. MGP funds for RHU I under this activity included P34,200 for the purchase of 114 sets of vests, which were worn by the BHWs while doing the survey. RHU II provided T-shirts to their BHWs. The vests and T-shirts served as an incentive for the BHWs. At the same time, it associated the survey with the local health units' official activities. RHU II had also included the purchase of 44 vaccine carriers, which were used during the CBMIS and other community projects.

TT Provision

1. Provision of TT Immunization through the BHS EPI Team Approach

Nurses were deployed to 48 BHSs in RHU II from August to December 1999. Midwives and nurses worked 593 out of the possible 960 immunization days within the 5-month period in the health stations to provide TT2+ to pregnant and post-partum women. RHU I has six nurses covering 24 barangays. Each nurse was in charge of four BHSs, which she visited once a month during the scheduled immunization day. RHU II had eight nurses available for this activity, which covered 49 barangays. Immunization days among BHSs were either on Tuesday, Wednesday or Thursday. This means that at most 24 BHSs were covered in a week. About 67 percent of BHSs were visited less than four times a month or roughly once a week. Only three BHSs had nurses more than eight times a month. BHSs with large populations and heavy client load had more clinic days adopting the EPI Team Approach.

For RHU I, the PhP35,000 allocation for RHU I from the LGU for printing of 7,000 pieces of HBMRs was not utilized since it was the PHO that supplied the HBMRs. No additional vaccines were provided by the PHO because the usual supply for the LGU was adequate. RHU I also budgeted PhP14,400 out of its MGP funding for the nurses' transportation during deployment, but this was not utilized within the 8 month-period since the initiation of this particular intervention.

On the other hand, RHU II has spent PhP40,200 of its MGP funds to purchase 134 T-shirts and 134 umbrellas as early as October 1999. These supplies were also used by the nurses, midwives and BHWs during their masterlisting survey.

2. Home follow-up of TT defaulters

This activity was perhaps the earliest MGP activity implemented. TT2+ defaulters were identified by midwives based on their target client list (TCL).

- *Contacting Defaulters through the Pink Letter System*

As early as July 1999, pink letters were printed and actively distributed to tetanus toxoid defaulters. Not all BHSs, however, adopted this intervention. In addition, some midwives would send the pink letters only to primies or pregnant women with their first child, while some would send them also to multiparous women. The BHWs delivered the letters and encouraged women defaulters to come for their follow-up doses.

Utilization of existing supplies of pink papers and LGU's assistance in printing facilitated the reproduction of the pink letter forms. The minimal MGP allocation for the purchase of pink mimeographing paper (P 3,980.00 for RHU I and P2,000.00 for RHU II) was not utilized by both RHUs at the end of the evaluation period.

- *Actual Home Visit Follow-Up*

Home follow-up visits for post-partum mothers have been an existing activity of the RHUs. The innovation under the MGP was the reminders or pink letters for TT2+ defaulters for pregnant and post-partum women. Midwives schedule their home visits once a month in the afternoon of EPI days because they also provide measles immunization. For larger *barangays*, the frequency of home visits is as often as three times a month. Home visits focused on the 38 percent of defaulters who were either pregnant or post-partum women.

3. ***Provision of TT Immunization to Women workers through Industrial Site Visits***

- *Planning: Contacting Industrial Sites*

The areas in Dasmariñas where this could be done were limited to *barangays* within the industrial zone. Out of 50 factories targeted by RHU I for this intervention, 30 were approached and 12 agreed to participate. The Office of the Mayor sent letters to these factories for their consent in conducting this particular intervention in their company. The supervising nurse of RHU I also coordinated with the personnel manager or the company clinic supervisor.

Aside from the inputs by the MGP and LGU, some companies provided inputs as their counterpart in this particular intervention. For example, one company printed its own TT2+ cards. Three companies provided cotton balls, while the other company provided a personnel masterlist for recording of TT2+ dose given to their female employees. Two companies provided mobility support for the MGP team in conducting the industrial site visits, and one company required its casual employees to bring their own syringes and needles while supplies for regular/permanent employees were covered by the company.

- *TT2+ Services*

A team composed of a nurse and four to five midwives in neighboring *barangays* of RHU I provided TT2+ to women industrial workers. The RHU staff conducted 24 visits to 12 factories. None of the PhP24,000.00 transportation budget for the nurses was utilized. No problems with the procurement of vaccines and supplies were encountered.

4. *Training TBAs to include motivating women for TT and FP*

The RHUs were already training their traditional birth attendants (TBAs) on aseptic delivery. For this intervention, midwives identified hilots who were not previously trained in their respective *barangays*. Training for hilots in RHU I and RHU II were conducted on August 2-4, 1999, and September 7-9, 1999, respectively.

Generally, no difficulties were encountered in obtaining the PhP62,400.00 funds for the training, which included expenses for meals and snacks. Based on the Fund Utilization Report submitted to the DIRFO in March 2000, all equipment and supplies specified in this activity were obtained between September to October 1999 (please see Appendix M). The LGU allocated a PhP2,500.00 budget for training materials. Based on the MGP plan, the Provincial Health Office was supposed to provide training assistance. However, the RHU staff were the lecturers and at the same time facilitators of the TBA training.

The MGP intervention training also included training for motivating women to come for TT2+ and family planning services. Basically, the topics of the training were almost similar between the two RHUs. However, it should be noted that RHU II included in their module sessions on breastfeeding, nutrition, infections and family planning, which were not in the RHU training module. In addition, RHU II touched on maternal immunization as part of preparation to delivery. It appears that RHU II emphasized more preventive aspects (Refer to Appendix Table 12).

The two training modules were intended to suggest that TT2+, family planning and LAM may be more emphasized among the RHU II hilots than the RHU I hilots. RHU II also held monthly meetings with their *hilots* for feedback and reinforcement. On the other hand, RHU I hilots adopted a strategy, requiring the pink card of the client before attending her delivery. The pink card would indicate that the woman had been to the BHS for her TT2+.

Family Planning

1. Provision of IUD Kits to 10 BHSs

Fund utilization report of Dasmariñas showed that procurement of supplies and equipment for this intervention charged to the MGP was accomplished two months later than the time frame indicated in the plan. Ten BHSs (5 from each RHU) with midwives who had Comprehensive Training on Family Planning were provided with IUD kits. This intervention made IUD insertion services available every afternoon at each facility. This is perhaps one of the more expensive MGP intervention activities, i.e., accounting for about 35% of Dasmariñas' the total MGP grant.

Generally, the equipment purchased satisfied the specifications required by the RHUs except for the examining tables requested by RHU II, i.e., metal-type tables that cost higher. This was resolved by charging two of five needed tables against the MGP funds available for this intervention and the other three to PHO-LPP funds.

2. *Escort Services for VSS clients*

Voluntary surgical sterilization (VSS) services are free at the municipal hospital, which is right in DBB. It is about two rides away from any point in town. During the planning, escort services were envisioned to encourage more clients to avail of this service. Identification of clients for VSS, particularly bilateral tubal ligation (BTL), had been done by midwives through family planning counseling at the BHSs. A referral slip was given to the potential VSS client right after FP counseling. VSS services were free, and scheduled every Tuesday and Thursday at the DBB Municipal Hospital.

Potential VSS clients were accompanied by their BHWs. Recently, trained hilots were helping the BHWs in accompanying potential VSS clients. In this particular intervention, the MGP has budgeted transportation allowance for the client and the accompanying BHW to the DBB Municipal Hospital. The client and BHW are entitled to P50.00 each for transportation allowance. Based on the MGP plan, the two RHUs are targeting 60 clients for VSS. Financial inputs are minimal (PhP12,000.00 for the whole LGU), but the health providers need to spend more time in motivating the women, as well as men for vasectomies.

Additional Activities

Dasmariñas conducted a number of activities that were not included in their original plan. This flexibility is apparently allowed by the DOH, although additional activities were no longer subjected to the review process.

1. *Mass Immunization for TT*

The mayor, or the LGU's local executive, was committed to a mass immunization campaign for TT2+ as the launching activity of the town's MGP, aiming for universal TT2+ coverage of all women of reproductive age. Streamers announced the campaign and all health personnel were mobilized to man the BHSs and RHUs. The BHWs encouraged women to go to their health centers. In RHU II, health personnel went house-

to-house in the afternoon. This activity was not part of the MGP plan and it was not clear whether resources were obtained from the MGP or from other sources. Recording of women vaccinated was done, but TT2+ accomplishment attributable to this activity could not be clearly extracted from the existing reports.

2. *TT immunization in schools and business establishments*

Midwives who did not have an industrial site in their catchment areas sought to increase their TT2+ coverage by going to schools and business establishments. However, accomplishments were not clearly reported, making it difficult to assess the effectiveness of this intervention.

3. *House-to-House TT2+ immunization*

RHU I implemented a house-to-house or "mop-up" operation to reach other women of reproductive age for tetanus toxoid immunization. It was expected that clients missed during the mass immunization at the health facilities would be covered by the mop-up operation.

VI. THE OUTPUTS AND OUTCOMES

The CBMIS

At the end of the evaluation period, masterlisting of 45 barangays in RHU II revealed that 27,562 households were covered in six months with 148,006 people identified. Appendix Table 8 shows the data collected from the CBMIS of RHU II. Important indicators from their collected information show that: less than 10% of children 12-59 months need immunization and/or Vitamin A supplementation and almost 40% of MWRA had unmet need for FP.

The CBMIS was quite useful for Dasmariñas as an interactive mechanism for directing health service provision schemes. Once potential clients and their health service needs were identified, the RHU II health personnel focused on serving them. The outcome indicators of RHU II's CBMIS initiative are underscored in Table 1, which shows marked increases in comparable indicators of 1998 and 1999. First, the number of new FP acceptors for all methods more than doubled when data for the last two quarters of the current and previous years are compared. Second, the number of women given TT2+ shots nearly tripled when comparable data for the pre- and post-MGP periods are contrasted. The increases for FIC were not as remarkable as the other two services.

Table 1. Indicators for TT2+, FP and FIC coverages, RHU II, 1998-1999, 3rd and 4th Quarters

1. Number of new family planning acceptors (all methods)	613	681	1,268	1,393
2. Number of pregnant mothers given at least TT2+	607	461	1,557	1,225
3. Number of FICs	1,305	979	1,378	1,103

Manpower constraints affected the rate of implementing this activity in RHU I. Although BHWs in RHU I were effective in using the standard instrument after going through several levels and versions of training, there were not enough BHWs to complete the CBMIS targets by March 2000.

Although midwives were quite successful in referring clients, there was no system for follow-up and recording. They also were more conscious in referring TT clients than referring women with unmet need for family planning. This suggests a need for reiterating the latter during regular meetings to be able to maximize benefits from the CBMIS.

Service providers were also noted to have experienced time constraints for CBMIS tasks given their already loaded time schedule for the provision of other health services. In addition to this, they were found to have little knowledge in understanding, processing, analyzing, and utilizing collected CBMIS data. One possible option to take is to distribute the responsibility of data processing from the current midwife-centered procedure toward involvement of BHWs in the initial processing of data. The latter could abstract information from the submitted forms for information that may be useful at their level before submitting them to the midwife for final aggregation at the LGU-level. *There is a need to develop a special form for BHWs to be used during the initial processing and to train midwives on how to more systematically aggregate data from the basic forms and the new form from the BHWs.*

Provision of TT immunization through the BHS EPI Team Approach

From August to December 1999, nurses were deployed to 48 BHSs in RHU II. A total of 1,910 TT vaccinations were given within the said period or about three mothers per BHS were immunized with TT during those days when the nurses were deployed to the health stations. It was felt that finding clients was not much of a problem since women were already seeking immunization for their babies, which may be taken as an example of integration of services and taking advantage of missed opportunities.

Comparing 3rd and 4th quarters of 1998 and 1999 reveal that TT2+ coverage more than doubled with 68% of the 2,782 pregnant and post-partum women given TT during these two quarters in 1999 were vaccinated during the clinic days with the EPI Team Approach. These are considerable given the limited inputs for this intervention.

This further exemplifies the value of integrating services to maximize opportunities for contact. Dasmariñas was also fairly successful in sourcing the inputs needed from the region and province (for example, the HBMR forms), thus they generated some savings, which could be used for other MGP activities

Home follow-up of TT defaulters

The pink letters were considered effective in bringing mothers to the health centers for subsequent prenatal check-ups. Midwives were quite satisfied with the 62% response rate of the 1295 women given pink letters. Some of the babies were given EPI shots only after their mothers had their TT shots. About 16 percent of babies were immunized during their first EPI visit. Of the 38% women who did not respond to the reminder letters and had to be followed-up during the house-to-house visits of midwives or BHWs, about 8 percent were immunized during the home follow-up campaign.

Midwives encountered several problems in conducting home visits. Women due for their TT2 shots refused to be immunized because of pain due to the injection or pains associated with childbirth and post-partum recuperation. Another problem refers to the nature and implications of a mobile target population. Midwives have difficulty in tracking down their target population. Women giving birth in the area sometimes spend their post-partum period somewhere else; thus they were not available during the follow-up home visits or the time for their subsequent TT doses.

Interviews with some midwives revealed a particular pattern. Out of five mothers, two were likely to be immunized in the BHS when they brought their babies for EPI, one would be immunized at home, one would not be available at the time of the home visit, and one would have transferred residence. The strategy adopted by health workers to address these problems was to get mothers to agree that they be immunized first before their babies using the slogan "*nanay muna bago baby*" (mother first, baby next).

It appears that our next main concern is how to expand the coverage to the remaining 40% of women. Those who were not available during home visits should be recontacted at a later date. If data on previous TT dose are available then a form or slip of paper should be left behind to remind the mother when she returns that she should contact the health center for her next TT dose. The same strategy may be applied for temporary or permanent movers. In the case of the latter, responsible members of the left-behind household may be requested to inform the mother of the number of additional TT doses that she still needs to get at her nearest health facility.

TT Immunization in industrial sites

The 24 visits by RHU staff in 12 factories where women workers resulted in the administration of tetanus toxoid immunization to 3,394 women, 61% of which were for TT1 and 30% for TT2. On average, 150 women were immunized during each visit. This MGP initiative contributed about 24.5% to the overall TT accomplishment in the municipality. In one large factory that was visited twice, TT accomplishment was at 700 women vaccinated per visit. This suggests that if all the 50 factories in Dasmariñas would be motivated to participate in this activity, this type of intervention may have a big impact on the health situation of mothers.

Training of Hilots for Referrals

Training for RHU I (20 hilots) and RHU II (26 hilots) were conducted on August 2-4, 1999 and September 7-9, 1999, respectively. A total of 447 TBAs were trained during the MGP period. These training were instrumental in getting hilots or trained birth attendants (TBAs) to contribute to the identified MGP activities in Dasmariñas. In RHU I, hilots were able to contribute 8.9% (n=730) of TT2+ and 35.6% (n=552) of FP accomplishment.

In RHU II, 150 deliveries were assisted by hilots during the MGP period. Hilots were successful in convince 88% of post-partum women to receive their TT2+ shots. This represents about 4.7% of the TT accomplishment of the RHU. They were also able to motivate 72.6% of women to use FP methods, which contributed about 4.1% to the total RHU's FP accomplishment.

Apparently, the strategy adopted in RHU II of conducting regular monthly meetings during which they shared experiences on complicated deliveries (which they claimed often resulted from unwanted pregnancies) and they were reminded that they should attend only to normal deliveries, was an effective way of getting hilots accept their role in the referral system.

Provision of IUD Services

Ten (10) BHSs were equipped with IUD kits for IUD insertion services. Six of the newly equipped BHSs accounted for 8 of 44 IUD insertions in RHU I, and 12 of 15 IUD insertions in RHU II. Four of the newly equipped BHSs have yet to perform IUD insertions. Surprisingly, 16 clients from the catchment area of one of these four BHSs were still referred to RHU I for IUD insertions, IUD insertion services are available every afternoon during weekdays at the newly equipped BHSs.

This is a relatively expensive intervention, which may lead to long-term results rather than short-term outputs as required by the MGP evaluation. Inputs will be used for years even after the completion of MGP so it may not be fair to gauge the effectiveness of this intervention on current output level. This, however, points to a clear discrepancy between MGP goals and LGU-selected MGP activities.

Escort Services for VSS clients

This refers to the MGP initiative of providing transportation allowance to midwives and BHWs to accompany VSS clients to the provincial hospital where this particular service is provided. Output indicators show that there was an increase in the number of clients ligated during the MGP period (58 clients) compared to the pre-MGP period (45 clients). The province-run hospital is located in RHU II so these are province-level data and are not reflective of RHU-level accomplishment.

Appendix Table 15 summarizes the MGP interventions, their peso inputs, outputs/outcomes and comments on sustainability. Some of the interventions are input-intensive (such as the CBMIS) and, therefore, may need outsourcing of funds if activities are to be continued after MGP.

Comparison of MGP Outcomes Among RHUs

This section compares the MGP outcomes in the two RHUs of Dasmariñas. Accomplishments of RHU I and RHU II for selected quarters before and after MGP are shown in Figures 2–5 below.

For RHU I, it can be seen that while performance improved dramatically for TT2+, it has remained relatively the same for FP. RHU I experienced drastic reductions in its FIC and VAC performance. While RHU II's FIC level has not changed, TT2+ coverage and proportion of FP users have markedly improved. The decline in RHU II's VAC performance was more dramatic than that for RHU I. Staff from both RHUs attributed this to the lack of supply of Vitamin A capsules for distribution.

These results need to be considered in assessing the over-all effectiveness of the MGP as efforts to focus on one outcome may displace other programs that are doing relatively well.

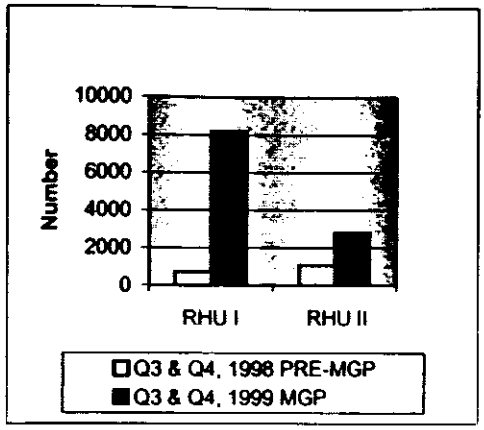

Fig. 2. Comparative data on the number of women given TT2+ in 2 RHUs, pre-and MGP period.

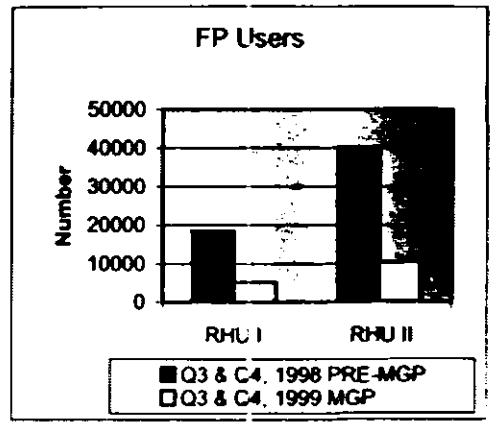

Fig. 3. Comparative data on FP users in 2 RHUs, pre-and MGP period.

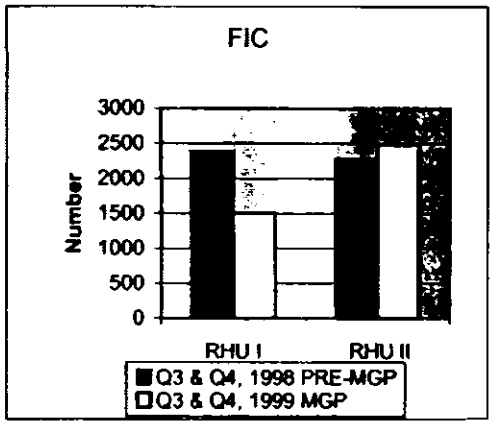

Fig. 4. Comparative data on the number of FICs in 2 RHUs, pre-and MGP period

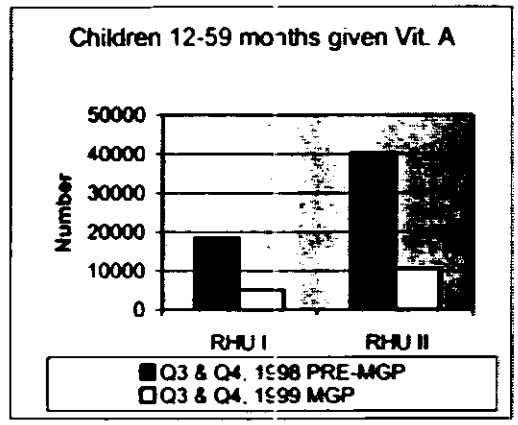

Fig. 5. Comparative data on the number of children given Vit. A in 2 RHUs, pre-and -MGP period

VI. CONCLUSIONS AND RECOMMENDATIONS

1. MGP outcomes for Dasmariñas show a remarkable improvement in TT2+ coverage, which reflects the local executive's bias for TT immunization over other MGP interventions. Hence, there is a need to reinforce efforts in carrying out other MGP

interventions, which focus on expanding FP, EPI, VAC, as well as other health care programs of the RHUs.

2. Support of the local chief executive is a very important factor in ensuring smooth implementation of MGP activities. It would be good to sustain the interest of the local executive in health-related programs by providing regular updates on specific MGP and non-MGP activities.

3. It is likewise important to get the health staff familiar with the administrative mechanisms in the LGU to simplify/facilitate fund utilization and sourcing of additional fund requirements.

4. A monitoring and effective feedback mechanism is needed and perhaps its design should be part of the planning process as well. In the Dasmariñas experience, early detection of problems in the FIC delivery could have been useful in designing a timely and effective feedback mechanism. Hence, the local health staff could have benefited more if the problem had been addressed effectively and on time.

5. Guidance or some form of technical assistance may also be needed after the conduct of the CBMIS survey to illustrate to the health workers the various uses of information in the data system. Further technical assistance from MSH, DOH, and PHO is deemed important to help sustain the CBMIS as an effective and useful intervention.

6. Making the CBMIS truly community-based may be limited by the capabilities of the BHWs who are supposedly responsible for its data collection and initial data processing. In Dasmariñas, the BHWs were responsible for data collection only. The midwives took charge of the data processing, which was already an additional workload for them. There is a need to train BHWs in initial data processing to summarize some indicators that they may be able to use at their level, in aid of the final summary to be done by the midwives at the BHSs.

7. It was not enough that health facilities are provided equipment. It was learned that in Dasmariñas, utilization did not automatically follow provision of IUD

equipment to several BHSs. Some other strategy should go hand-in-hand with interventions like this. This finding necessitates more efforts of service providers, particularly the midwives and BHWs in information dissemination about the availability of the equipment to pertinent health personnel and in motivating clients toward its utilization.

8. The MGP highlights its fast track granting mechanisms but the LGU infrastructure may not be that responsive. In Dasmariñas, the speed in the MGP grant process did not necessarily make a difference considering that the LGU health personnel needed more time to plan for innovative interventions, lay down the needed mechanisms, and orient the participating health personnel on the goals, requirements and procedures involved so they can effectively implement the program activities.

9. The local health people should be made to realize the diversity and richness of resources that are available in their community waiting to be tapped. Generating such awareness may also be one of the technical assistance that they should be provided.

APPENDICES

A) Table 2. Program Goals vis-à-vis 1998 NDS

Indicators			
Contraceptive Prevalence Rate (CPR), modern methods	27	35	36
Fully Immunized Children (FIC)	65	80	80
Tetanus Toxoid 2 plus (TT2+)	38	80	80
Vitamin C coverage (VAC)	71	85	85

B) Definition of Terms

C)

1. Contraceptive Prevalence Rate (CPR): This rate is measured as the proportion of women 15-49 years of age reporting current use of any contraceptive method at the time of assessment. The denominator consists of all women 15-49 years of age (WRA). However, in some DOH service statistics, the denominator is defined as currently married women 15-49 years of age (MWRA). Whenever possible and if the information is available, a delineation between these two measurements will be made.

2. Fully Immunized Child (FIC): This is the percent of living children 12-23 months of age who have been vaccinated before their first birthday with three doses of Oral Polio Vaccine (OPV), three doses of Diphtheria-Pertussis-Tetanus (DPT) vaccine, one dose of Bacillus-Calmette-Guerin (BCG) vaccine and one dose of measles vaccine

3. Vitamin A Coverage (VAC): This refers to the percent of children 12-59 months of age who received a Vitamin A supplement in the last six months

4. Tetanus Toxoid two plus (TT2+): This is the percent of pregnant women and mothers of reproductive age (15-49 years) with children under 5 years of age who have received at least 2 doses of tetanus toxoid.

5. Unmet need for family planning (FP): This refers to the percent of currently married women of reproductive age (MWRA) who want to limit or space their next child but are not using any family planning method and those using a method but are not satisfied with their current method. The denominator is all married women of reproductive age 15-49 years of age.

C) Table 3. Health facilities and resources.

Number of barangays	27	49	73
1999 Population	195,911	167,172	363,083
Staffing: Physicians	2	2	4
Nurses	8	11	19
Midwives	26	37	63
Sanitary Inspectors	2	2	4
BHWs	80	81	161
Health worker: Population ratio			
Physician	1: 97,955	1: 83,586	1: 90,771
Nurse	1:24,489	1: 15,197	1: 19,110
Midwife	1:7,535	1: 4,518	1: 5,763
Public facilities:			
Hospitals	0	1	1
RHUs	1	1	2
BHSs	25	49	74
Private facilities:			
Hospitals	1	1	2
Clinics	5	16	21

Source: RHU records

D) Table 4. Health Budget and Expenditures, 1996-1998

1996 App	2,587,847.00	73.2	946,139.50	26.8	3,533,985.50	3.9	89,623,529.38
Exp	2,348,514.37		889,229.55		3,237,743.92		75,306,538.56
1997 App	3,747,102.10	75.2	1,237,045.80	24.8	4,984,147.90	3.8	131,322,226.68
Exp	3,516,239.39		1,236,981.16		4,753,220.55		109,686,912.46
1998 App	4,188,245.80	70.3	1,768,400.00	29.7	5,956,645.00	3.7	162,173,363.17
Exp	3,794,971.71		899,729.24		4,694,700.95		122,305,765.32
Rural Health Unit II:							
1996 App	2,103,268.00	67.9	994,148.50	32.1	3,097,416.50	3.4	89,623,529.38
Exp	2,003,103.63		909,463.85		2,912,567.48		75,306,538.56
1997 App	3,318,890.31	72.8	1,240,000.00	27.2	4,559,390.31	3.5	131,322,226.68
Exp	2,851,538.21		1,178,677.06		4,030,215.27		109,686,912.46
1998 App	3,702,470.00	66.3	1,881,000.00	33.7	5,583,470.00	3.4	162,173,363.17
Exp	3,344,647.68		935,606.32		4,280,254.20		122,305,765.32

*App – appropriation; Exp – expenditure

E) Table 5. MGP and LGU Budget Counterparts

Item				
Transportation				
• BHS EPI Team Ap.	14,400			
• BHWs-survey	18,720			
• Factory site visits	12,000			
• VSS escort services	6,000	6,000		
Equipment				
• Overhead projector	15,000	15,000		
• Sterilizers	7,500(5)	15,000(3)		10,000(2)
• BP apparatus	12,000(3)			
• Examining table		8,000(2)	10,000(5)	
Training (Hilots)				
• Meals and snacks	8,700	8,700		
• Training materials			1,250	1,250
• Hilot kits	7,500	7,500		
Supplies and materials				
• Pink paper	3,980	2,000		
• Vests	34,200			
• Vaccine carriers		61,600	36,400	
• IUD kits	60,000(5)	36,000(3)		24,000(2)
• Umbrellas		20,100		
• T-shirts		20,100		
• HBMR printing			35,500	
Total	200,000	200,000	82,650	35,250
Overall	400,000		117,900	

F) Table 6. Pre- and- MGP Service Delivery, Dasmariñas

BHS EPI Team Approach	Once a week, provided by the midwife	Once a week, provided by the midwife together with the nurse
Home follow-up of TT defaulters	Defaulters reminded by BHWs	Pink letters are sent to defaulters
TT immunization	Pre-natal days (once a week)	Routine plus • Mass immunization • Immunization in industrial sites and other business establishments • Immunization in schools
IUD services	Provided at the two Rural Health Units	10 more BHSs equipped with IUD kit
Voluntary surgical sterilization	Clients referred to DBB Municipal Hospital	Clients referred and escorted to the DBB Municipal Hospital
Services provided by TBAs	Aseptic delivery	Aseptic delivery plus referrals for FP and TT

G) Table 7. Accomplishment of Critical Steps

1. Request for Application (RFA) issued and received by LGU	March	
2. Letter of Intent (LOI) submitted to the DIRFO	April 29	~ 22
3. Orientation meeting done	May 12	9
4. First draft and application done and received by DIRFO	May 12	1
5. First draft reviewed by DIRFO	May 24	8
6. Draft review fed back to LGU for approval; final approval of DIRFO	May 24	1
7. Memorandum of Agreement complemented and signed	June 7	10
8. Fund released and received by LGU	June 28	15
9. First key activity implemented	August 6	29
Total working days for the process to be completed		95
Average number of working days per critical step		10.5

H) Table 8. Matrix of the inputs, process and outputs of the Provision of TT Immunization through the BHS EPI Team Approach

Inputs	Process	Outputs
From LGU Staff time (6 nurses-RHU I & 8 nurses – RHU II) P 35,000 for forms From MGP P 54,600 for T-shirts, Umbrellas, transportation of nurses during the deployment (P14,400 of the amount) From DIRFO & PHO Vaccines, syringes, Needles, HBMR forms	• Funds for forms not used because PHO provided forms • T-shirts & umbrellas also used for CBMIS & other MGP activities • Schedules followed as planned as a rule	• 1910 TT vaccinations done (Aug – Dec 99) or about 3 mothers per EPI day served • TT2+ coverage more than doubled compared to same quarters for 98 • Contributed 68% of TT accomplishment for these quarters

I) Table 9. Matrix of the inputs, process and outputs of the Home follow-up of TT Defaulters

Inputs	Process	Outputs
From LGU Staff time Paper From MGP P 5980 for printing of Pink letters From DIRFO & PHO Vaccines, syringes, Needles	• some post-partum women not available on follow-up • some women refuse subsequent dose because of pain	• 62% (n=803) of women responded to letters • 8% immunized on home ff-up • 16% immunized on baby's first EPI visit • 16% unavailable

J) Table 10. Matrix of the inputs, process and outputs of the Masterlisting/Case Finding and Provision of services

[illegible]	[illegible]	[illegible]
<u>From LGU</u> Staff time Funds for training <u>From MGP</u> TA from MSH (CBMIS) P114,520 for BHW vests, Transportation & vaccine Carriers Forms from MSH <u>From DIRFO & PHO</u> Vaccines, syringes, Needles, logbooks	• development of standard form took time • initial MGP budget did not include funds for forms • RHU II to save time used English forms & mobilized its midwives • RHU I waited for the translated standard form & mobilized its BHWs; also tapped research funds from university; data gathering 75% complete as of Mar 00 • BHWs capable of conducting CBMIS & fulfilling action needed • RHU II has not updated its CBMIS as of March	RHU II covered 27,562 households in 6 months, w/ ff findings (see Table below): • Less than 1 J% of children 12-59 months needing immunization &/or Vit. A • Almost 40% of MWRAs w/ unmet need for FP • Number of new FP acceptors doubled compared w/ same quarters in 1998 • Number of TT2+ almost tripled compared to same period 199[illegible]

K) Table 11. Summary of CBMIS Tally Sheets of 28 barangays of RHU II, February 2000

A. Children 0-11 months old	655	-
1. >9 mo with incomplete or no immunization	36 (5.5%)	289
2. <9 mo with incomplete or no immunization; schedule not followed	90 (13.7%)	601
3. <9 mo with incomplete or no immunization; schedule followed	322 (49.2%)	982
B. Children 12-59 months old	2,254	-
1. With incomplete immunization	156 (6.9%)	999
2. Not given vitamin A in last 6 months	117 (5.2%)	906
	[10 barangays]	
C. Women of reproductive age	6,582	-
1. Pregnant with incomplete or no TT	272 (4.1%)	828
2. Non-pregnant MWRA with incomplete or no TT	2,966 (45.1%)	9,188
3. Single WRA with incomplete or no TT	2,188 (33.2%)	6,713
D. MWRA	6,087	-
1. Practicing FP but not satisfied	114 (1.9%)	204
2. Not wanting to have a child or wanting to space but not practicing FP	2,413 (39.6%)	5,274
3. Wanting a child soon	431 (7.1%)	1,004

L) Table 12. Matrix of the inputs, process and outputs of TT immunization to women workers through industrial sites visits

Inputs	Process	Outputs
From LGU Staff time From MGP P 24,000 transportation From DIRFO & PHO Vaccines, syringes, Needles From industrial sites Staff time TT cards, Cotton balls Lists of employees	• Required preliminary linkages with industrial sites • One company nurse did the immunization but encountered a number of side effects • Only 1/3 of factories cooperated • Changes in worker shifts make follow-up visit difficult	• 3,394 TT doses administered; 61% for TT1, 30% for TT2 • responsible for 24.5% of TT accomplishment • In one large factory, accomplishment was 700 women vaccinated in one day

M) Table 13. Number of women given TT during the industrial sites visits, RHU I

[illegible]	[illegible]	[illegible]					
	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
Cambridge	3	225	120	7	5	2	359
Azumaya	2	54	47	0	0	1	102
A-Grade	2	927	395	48	13	23	1,406
NAPI	4	287	120	24	133	2	566
Sanwa	2	51	50	0	0	0	101
Kolin	2	48	39	0	0	0	87
Dutchboy	2	99	50	0	0	0	149
KLT	1	12	2	1	0	0	15
Showa	2	185	185	0	0	0	370
Luzon Magnetics	2	168	2	0	0	1	171
Ishida	1	14	0	0	2	52	68
Total	24	2,070	1,010	80	153	81	3,394

M) Table 14. Matrix of the inputs, process and outputs of Training TBAs to include motivating women for TT and FP

[illegible]	[illegible]	[illegible]
<u>From LGU</u> Staff time P 2500 for training <u>From MGP</u> P 62,400 for overhead Projector, hilot kits, meals <u>From PHO</u> TA for training	• RHU II training included Breastfeeding, Nutrition, FP, maternal immunization & infections • RHU II also conducts monthly meetings with their TBAs for feedback & additional inputs • Some TBAs required TT immunization before they would consent to assist in a birth	• 47 TBAs trained • For RHU I, hilots contributed 8.9% (n=730) of TT2+ & 35.6% (n=552) of FP accomplishment • For RHU II, of the 150 hilot deliveries during the MGP period, 88% w/ TT2+ & 72.6% use FP, contributing 4-5% of the RHU accomplishment

N) Table 15. Topics of the Hilot training, RHUs I and II

A. 1) Characteristics of a trained hilot	√	
2) Delivery kit	√	√
3) Human reproduction I and II		√
4) Care during pregnancy	√	√
5) Changes in the body during pregnancy	√	√
6) Pre-natal care	√	√
B. 1) Guidelines in providing relief from discomforts associated with pregnancy	√	
2) Danger signs and symptoms in pregnancy	√	√
3) Risk conditions	√	
C. 1) Dangers in pre-mature and overdue delivery	√	√
2) Care during labor and delivery (RHU II has two subtopics: Preparation and stages of labor)	√	√
3) Abnormal/normal labor		√
4) Immunization (mother); Preparation for delivery		√
D. 1) Post-partum care	√	√
2) Newborn care	√	√
3) Breastfeeding		√
4) Nutrition		√
5) Nature, Causes and Prevention of infection in mother and baby		
6) Family planning		√
		√
E. 1) Birth registration	√	√
2) BP taking practice	√	

O) Table 16. Matrix of the inputs, process and outputs of the Provision of IUD Kits to 10 BHSs

Inputs	Process	Outputs
From LGU Staff time P 34,000 for kits & Sterilizers From MGP P 138,500 for kits, Sterilizers & BP apparatus From PHO (LPP) Examining tables & BP Apparatus	• IUD insertion available daily at the equipped BHSs • Apparent reluctance of some midwives to perform IUD insertions (may require refresher training) • Records of IUD insertions difficult to track back to barangays	• 10 BHS equipped for IUD insertion • 8 out of 44 RHU I and 12 out of 15 RHU II IUD insertions done at newly equipped BHSs • 4 equipped BHSs have yet to perform an insertion, though 16 clients from the catchment area of one of them had gone to RHU I for IUD insertions

P) Table 17. Matrix of the inputs, process, outputs of Escort Services for VSS Clients

Inputs	Process	Outputs
From LGU Staff time From MGP Transportation cost	• Some trained midwives can do counseling for BTL at BHS; vasectomy is not actively promoted • BHWs & TBAs accompany clients to hospital • Records of BTL accomplishment at RHU, BHS & hospital do not tally	• 58 clients ligated during MGP compared to 45 during same period pre-MGP

Q) Table 18. Summary of inputs, effects on outcome and sustainability of the different interventions/innovations

CBMIS	I – P52,920 + (P36,400) II – P61,600	TT2 – routine services almost tripled compared to same quarter of previous year; FP (new acceptors) – increased by 10% from previous quarter; doubled compared to same quarter of previous year FIC – slight increase in RHU II (9% from 1958 – 1999 in last 2 quarters)	Moderate; needs effort to make the system work or for the system to be appreciated by health workers
BHS EPI Team Approach	I – P14,400 + (P35,400) II – P40,200	May increase TT clients by 3 mothers per clinic day with EPI Team; Overall TT more than doubled during quarter with MGP	High; deployment of nurses actually being done as part of routine
Home follow-up of TT defaulters; sending of reminder letters	I – P3,980 II – P2,000	RHU I – may increase utilization of routine services by 61%; RHU II – may increase utilization of routine services by 65%	High; home follow-ups actually the routine post-partum home visits
TT immunization in industrial sites	I – P12,000	Total number of women vaccinated with TT increased by 24.5%	High with continuous cooperation of companies and vaccine support from PHO
Training of hilots for referrals	I – P31,200 + (P1,250) II – P31,200 + (P1,250)	I. Effective referrals- for TT – 8.9% of RHU accomplishment; for FP – 35.6% of RHU accomplishment II. Effective referrals- For TT – 4.7% of RHU accomplishment For FP – 4.1% of RHU accomplishment	High, with proper supervision by midwives
IUD services	I – P79,500 + (P10,000) II – P59,000 + (P34,000)	I – slight increase may not be attributable to MGP II – MGP may have contributed to the increasing trend Numbers too small to make conclusions	High; needs more effort for information dissemination
Escort services for VSS clients	I – P6,000 II – P6,000	Increasing trends in new acceptors observed; Numbers too small to make conclusions	High

R) Interviewees

DIRFO IV – Regional Technical Office:
Dr. Leticia Olivar, LPP Coordinator
Ms. Remy Barretto, FP Coordinator

Regional Field Extension Office, Trece Martirez City
Dr. Nerisa Javier, highest DOH-retained

Rural Health Unit I, Dasmariñas
Dr. Cynthia Cristobal, Rural Health Physician, MHO
Dr. Liberty de Jesus, MD, Paliparan Site
Tina Llacer, Public Health Nurse, Langkaan I BHS
Lanie Andaya, Rural Health Midwife, Paliparan Site
Grace Faquing, Rural Health Midwife, Citihomes BHS
Annabelle de la Rea, Rural Health Midwife, Humayao BHS

Rural Health Unit II, Dasmariñas Bagong Bayan
Dr. Minerva Mangubat, Rural Health Physican
Marilou Maximo, Public Health Nurse
Praxedes Ramirez, Public Health Nurse
Jennifer Ignacio, Rural Health Midwife, Pag-asa BHS
Rosanna Arguel, Rural Health Midwife, Luzviminda II BHS
Teresa Buenaventura, Rural Health Midwife, San Mateo BHS

Events Observed/Documented

1. CBMIS training for core group, Susan's Bulalo, 31 August 1999
2. CBMIS training for midwives and BHWs, Bautista BHS, 2 September 1999
3. Meeting between RHU physicians and de la Salle University A. King Research Center for possible collaboration, 10 September 1999
4. Follow-up on research proposals submitted by the RHU physicians, 15 September 1999
5. Pre-natal consultation, Langkaan BHS, RHU I, 16 September 1999
6. TT immunization in Nippon Antenna, Phils. Inc., RHU I, 20 September 1999
7. TT immunization in A-Grade Mfg., RHU I, 21 September 1999
8. CBMIS survey (masterlisting), Luzviminda II, RHU II, 23 September 1999
9. TT immunization, Showa Company, RHU I, 15 November 1999
10. Monthly meeting of trained hilots, RHU II, 16 November 1999
11. CBMIS survey, Paliparan Site, RHU I, 14 March 2000
12. TT immunization, Nissin-Robina Comp., RHU I, 29 March 2000