

Evaluation of the National Health System Response to **HIV** in the Dominican Republic

A Political, Managerial, and Technical Tool For Progressing Toward Universal Access



Pan American Health Organization
Santo Domingo, Dominican Republic



***EVALUATION OF THE NATIONAL
HEALTH SYSTEM RESPONSE TO HIV IN
THE DOMINICAN REPUBLIC***

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Editors' Notes

Date of publication: This publication is an edited and formatted version of a report of the same title that was circulated in electronic form in March 2007. The original content has been preserved. In some cases the text refers to events occurring in the future when in fact they had actually already taken place by the time the printed version appeared.

Representation of numbers: In the Dominican Republic, unlike other Spanish-speaking countries, decimal fractions are represented with a period rather than a comma and the comma is used to separate thousands. Since this document reports on a study produced in and intended for the Dominican Republic, the publication has followed the practice used in that country.

Use of language: The language used in connection with the response to HIV is very important. Choices of words and expressions can have a positive or negative impact on the epidemic. For Spanish, this report has used the language recommended in the document *Terminología relacionada con el VIH: actualización 2006 de la OPS* [PAHO, HIV-related Terminology, rev. 2006]. Attention was also paid to the recommendations contained in the 2008 version of the *UNAIDS Terminology Guide*.

According to these recommendations, the term HIV/AIDS is to be avoided. It is preferable to use the acronym HIV alone except when referring to the advanced stage of HIV infection, where the word AIDS would apply. In Spanish, *sida* [AIDS] is written in lowercase letters, since the Royal Academy of the Spanish Language has included the word in the 22nd edition of its dictionary, which means that it is now officially recognized as a word in the language. Acronyms, such as PLHA, should be avoided in order not to stigmatize people living with the disease. Reducing people to letters or acronyms deprives them of their dignity.

Preface

In recent years, the international community that participates in providing official development assistance has shown its unequivocal commitment to controlling the HIV epidemic and aiding the people affected by the disease. The declarations of political commitment, expressed at the highest level in the United Nations Millennium Development Goals, have been accompanied by significant increases in the availability of financial resources allocated for the response to HIV. In addition to creation of the Global Fund to Fight AIDS, Tuberculosis, and Malaria, there have been grants from bilateral cooperation agencies and loans from the development banks. In the Region of the Americas, governments have reviewed their priorities within the allocation of public moneys to health and, when possible, they have gradually added more public funds for the response to HIV.

As a result, national health systems have been faced with the unusual challenge of dealing with an unprecedented volume of resources. The main challenge for the National Health Authority has been to guide the various stakeholders in the execution of these resources to ensure that they are used efficiently and yield the maximum possible results, given the current state of the knowledge. In the course of this process, concerns have arisen regarding the quality of the expenditure and the capacity of the system to handle this transitory “abundance.” It is therefore indispensable to take the long-term perspective in decision-making to ensure the sustainability of the response.

In this context, and in response to a request from the Secretary of Public Health and Social Welfare (SESPAS) of the Dominican Republic, the Pan American Health Organization assumed leadership in managing the evaluation that is presented in this document. This technical cooperation has made it possible to construct an evaluation methodology that takes into account the National Health System as a whole and at the same time looks at the specific current circumstances that bear on its management of the HIV epidemic. The approach has been to analyze the quality of the expenditure in terms of impact goals that go beyond the process indicators that typically guide the monitoring and evaluation done by financing agencies.

The methodology offered in this document for evaluating the National Health System’s response to HIV is based on the general premise that the allocation and use of resources should be guided by the principle of maximizing social profitability. In this particular case, the criterion of social profitability means providing adequate care for persons living with HIV while at the same time working intensively to reduce the rate of transmission of the virus.

PAHO recognizes the importance of the political will expressed by SESPAS when it requested assistance in the preparation of this external evaluation, which is intended to serve an instrument for identifying areas that need strengthening in their response to HIV and also for providing relevant information for the decision-making process. PAHO also acknowledges the commitment and high aspirations of the SESPAS personnel who collaborated with the evaluation team in this exercise, which turned out to serve as a field test for the development of a regional instrument that will have the potential to help improve health conditions throughout the Region.

In delivering this instrument, the Organization renews its commitment to continue to support the Member Countries in their search for effective and sustainable solutions in their response to HIV.

Mirta Roses Periago
Director
Pan American Health Organization

Presentation

Since the initial years of the AIDS epidemic in the Dominican Republic, the Pan American Health Organization has played a lead role in health promotion and the transmission of preventive effective methods, of treatment and care, to people living with HIV.

In this context of commitment and cooperation, and in response to a request from Mr. Secretary of State of Public Health and Social Welfare of the Dominican Republic, Dr. Bautista Rojas Gómez, the Pan American Health Organization took the leadership role in conducting the external evaluation presented in this document, which counted on the participation of principal actors and cooperating entities of the health sector in the country. The formation of this technical cooperation allowed the construction of a methodology that, looking at the entire National Health System, is specific to the circumstances that are given at this moment in the management of AIDS epidemic. The focus is to analyze the quality of spending in relation to the goals of impact, beyond the process indicators, that tend to guide the monitoring and evaluation on the part of the financing entities. The entire process is saturated with the principle of equity and social profitability.

PAHO highly values the political will that the Ministry of Public Health expressed upon requesting the preparation of this external evaluation, as an instrument for identifying the strengths and weaknesses in the national response in health to the problems of AIDS, in order to determine gaps and in addition to providing information relevant to the process of decision-making. Furthermore, PAHO thanks the effort, the appropriation of the methodology, the strategic vision and the markedly participatory character with which the personnel of DIGECITSS and COPRESIDA supported the process of evaluation, which, undoubtedly, provides a wealth of information in order to strengthen the country's efforts in controlling the epidemic.

Lastly, PAHO wants to express steady recognition to the entire technical team of the United Nations, to USAID, and especially the joint evaluation with UNICEF, as well as to the NGOs, representative associations of civil society and of people living with HIV, that in one way or another gave their time and experience in order to enrich the results of this work.

Dra. Ana Cristina Nogueira
PAHO/WHO Representative
Dominican Republic

Abbreviations

ARV	antiretroviral drug
CAFTA	United States-Dominican Republic-Central America Free Trade Agreement
CBM	Basic List of Essential Drugs
CCM	Country Coordinating Mechanism
CCU	comprehensive care unit
CNSS	National Social Security Council
CONAPOFA	National Council on Population and Family
COPPFAN	Presidential Commission on National Pharmaceutical Policy
COPRESIDA	Presidential Council on AIDS
DGDF	Directorate General of Drugs and Pharmacies
DHS	Demographic and Health Survey
DIGECITSS	Directorate General for the Control of STI/AIDS and STI (formerly PROCETS)
DIGEMIA	Directorate General of Maternal, Child, and Adolescence
DIGPRES	Directorate General of Health Promotion and Education
DPS	Provincial Health Directorate
DRS	Regional Health Directorate
ECLAC	Economic Commission for Latin America and the Caribbean
EPI	Expanded Program on Immunization
GDP	gross domestic product
GFATM	Global Fund to Fight AIDS, Tuberculosis, and Malaria
HAART	highly active antiretroviral therapy
HIV	human immunodeficiency virus
IEC	information, education, and communication
IMAI	integrated management of adolescent and adult illness
M&E	monitoring and evaluation
MDG	Millennium Development Goals
MSM	men who have sex with men
NGO	nongovernmental organization
OI	opportunistic infection
ONAPLAN	Undersecretariat of Planning in the Secretariat of Economy, Planning, and Development
ONRF	National Drug Regulation Agency
PAHO	Pan American Health Organization
PCMT	prevention of mother-to-child transmission
PEN	National Strategic Plan for HIV, AIDS, and Other STIs
PEP	post-exposure prophylaxis
PFN	National Pharmaceutical Policy
PLANDES	National Health Plan
PNRTV	National Program for the Reduction of Vertical Transmission
PROCETS	National Program for the Control of STDs and HIV/AIDS (now DIGECITSS)
PROMESE/CAL	Essential/Drug Program/Logistic Support

SDSS	Dominican Social Security System
SENASA	National Health Insurance
SESPAS	Secretariat of Public Health and Social Welfare
SFS	Family Health Insurance
SNS	National Health System
SRS	Regional Health Service
STI	sexually transmitted infection
SWOT	strengths, opportunities, weaknesses, and threats
TRIPS Agreement	Agreement on Trade-related Aspects of Intellectual Property Rights
UNAIDS	Joint United Nations Program on HIV/AIDS
UNAP	primary care unit
UNDI	Institutional Development Unit
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Executive Summary

Scope and Purpose

In response to a request from the Secretary of Health of the Dominican Republic, the Pan American Health Organization (PAHO/WHO) assumed the responsibility of coordinating an external evaluation of the National Health System's response to the HIV epidemic in the country.

The evaluation team consisted of national and international personnel representing a number of different cooperation agencies (PAHO/WHO at the regional and global level, UNICEF, UNAIDS, and USAID). The national process was carried out under the political and strategic leadership of the Secretary of Public Health and Social Welfare and the PAHO/WHO Representative in the country, while responsibility for technical management was shared by the Directorate General of STI and AIDS Control (DIGECITSS) and a multidisciplinary technical team assembled by PAHO/WHO and UNICEF.

The process, which was highly participatory, had the support of the United Nations Theme Group on HIV/AIDS and its Secretariat (UNAIDS), other international agencies, including USAID, several programs and units of the Ministry of Public Health and Social Welfare (SESPAS), the Presidential Council on AIDS (COPRESIDA), nongovernmental organizations, and networks of persons living with HIV.

The evaluation team worked intensively on gathering the information, a process that involved reviewing statistics and documents and holding a series of meetings with key players (users, suppliers, policy-makers, and technical and financial decision-makers).

The period under evaluation starts in 2003, the year when the country introduced a more integrated national response and took on the execution of external resources.

The present document reports the findings from this exercise, which was conducted in three phases: (a) collection of data and presentation of the findings and preliminary recommendations (4-5 December 2006), (b) participation in a workshop to discuss the findings and recommendations emanating from the evaluation (9-10 March 2007), and (c) participation in a workshop to prepare a plan of action based on the findings from the evaluation (12-13 April 2007).

Findings

The evaluation showed that the country has made progress in recent years. Between 2004 and 2006, the capture of the number of persons living with HIV increased threefold (from 5,041 to 14,050), and the number of persons living with HIV being treated with antiretroviral drugs (HAART) increased by nearly 500% (from 956 in 2004 to 5,001 in 2006). The number of health centers offering comprehensive care for persons living with

HIV grew from 14 to 46 during the same period, and they now cover most of the national territory and all large cities in the country. In addition, the number of health facilities with trained resources and the necessary equipment for interventions under the National Program for the Reduction of Vertical Transmission (PNRTV) increased from 22 to 122.

All of these achievements were possible because the country was able to raise external resources. During this period, COPRESIDA executed a loan from the World Bank in the amount of US\$25 million, as well as a grant of US\$48.5 million from the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM). Additionally, financial resources and technical cooperation were received from bilateral and multilateral international sources: USAID, the UNAIDS Secretariat, and a group of cosponsoring agencies (UNICEF, PAHO/WHO, and UNFPA).

The availability of drugs has been guaranteed for the people receiving HAART through arrangements to procure the drugs at competitive prices. The Clinton Foundation has played a key role in this regard, assisting in negotiations that made it possible to obtain the drugs at prices lower than the reference prices for the Region of the Americas.

The country has highly skilled human resources for programming and managing its health response; it has developed its infrastructure; and it has human resources specifically assigned to comprehensive HIV care and the prevention of transmission. In addition, protocols and standards for care have been developed, and trained human resources are available in the comprehensive care units (CCUs) and the services operated under the PNRTV.

Even so, however, the achievements are low compared to the volume of resources used. The evaluation found that the effectiveness of spending has been low. Despite good performance levels, according to the evaluation criteria used by the external financing agencies (the World Bank and the International Monetary Fund), it is important to bear in mind that those levels of performance are measured against a set of agreed-upon indicators and not in terms of the quality and cost of the interventions that were required in order to achieve these indicators.

This evaluation confirmed previous studies that have reported a low level of performance on the part of the National Health Service due, among other things, to weaknesses in its capacity to assign and manage resources in a manner conducive to achieving maximum social profitability. In this case, the social objectives are to serve persons living with HIV on a timely basis and to reduce the rate of transmission of the virus. Another reason for this weak performance is that the Health System's national response to HIV has taken place outside the reform processes, as evidenced by its vertical management and care model, which is inconsistent with the care model and separation of functions being promoted under the sectoral reform.

Another significant weakness was observed in the leadership being provided by the national health authority, which hinders the overall capacity of the National Health System to mount an efficient and effective response to HIV. Mechanisms and processes

are needed to generate synergistic links between the different entities. Interviews with key personnel and other information analyzed reveal a high degree of complexity and confusion in the delineation of roles and responsibilities, as well as significant duplication of coordination and management mechanisms and processes. This situation is aggravated by the fact that external financing agencies require vertical organizational structures for the management of funds.

However, according to current legislation and agreements, SESPAS has the authority to coordinate all involved agencies. Hence there is good potential for the health authority's leadership role to be strengthened in the near term.

Even though the Essential Drug Program/Logistic Support (PROMESE/CAL) is mandated by presidential decree to purchase all drugs for the public sector, so far it has not participated in any process involving the purchase of ARV drugs or the prepackaged treatment kits used for STIs or opportunistic infections. Local dispensaries do not offer drugs for persons living with HIV either. COPRESIDA and DIGECITSS have created supply parallel systems alongside PROMESE/CAL, resulting in wasted management infrastructure for the purchasing, storing, and dispensing of drugs. Since the drugs are distributed in parallel by PROMESE/CAL, the Yobel Supply Chain, and DIGECITSS, in effect the country is tripling its effort and financial investment by having three different mechanisms for allocating resources to be used for the same purposes.

Even though the current administration prioritized strengthening the participation of social organizations in monitoring and evaluation and to the social oversight of services and programs, the evaluation found that the type of relationship that COPRESIDA establishes with nongovernmental organizations, especially in terms of the system for contracting representatives from the affected community, is undermining any real fulfillment of these priorities.

In recent years there have been reports of numerous cases of stigma and discrimination against persons living with HIV of Haitian origin, both by others with HIV and by health providers themselves. Even though, as a matter of policy, SESPAS does not refuse health services to anyone who needs them, there is increased stigma and discrimination against persons of Haitian origin that are living with HIV. This behavior threatens fulfillment of the commitment made by the health authority to guarantee equitable access to quality services. It is essential to address this dimension of stigma and discrimination effectively in order to guarantee progress towards the goal of universal access.

The gaps in coverage and the money that would be needed to close them are alarming. In terms of service coverage and health outcomes, the major gaps observed may be summarized as follows:

- Based on estimates from the previous year, only 9% of pregnant women with HIV are fully covered.
- During 2004-2006, 5,101 children became infected as a result of missed opportunities for the health service to capture them and intervene.

- In 2006, the health system reached only 21% of the estimated number of persons living with HIV, which means that approximately 51,900 persons living with HIV were not covered.
- As of 31 December 2006, only 49.3% of the estimated number of persons living with HIV who needed HAART were in treatment.
- During the period from 2004 to 2006, there were an estimated 19,190 deaths from AIDS, many of which could have been prevented if these people had been captured early and given access to HAART.

In terms of financial resources, the evaluation found that spending has been executed inefficiently, with little effective response to the epidemic or reduction in transmission of the virus. This low level of effectiveness in the execution of spending will make the funding gap even larger in the future, as illustrated by the following calculations:

The system would have to pay a minimum of US\$44.5 million if it made the commitment to provide lifelong care for the children who turned out to be HIV-positive as a result of opportunities missed during 2004-2006.

Per capita spending, taking into account the number of persons with HIV being monitored in comprehensive care units and the number of pregnant women receiving some level of care under the PNRTV, rose from US\$605 in 2004 to US\$986 in 2006.

The size of the projected gap in funding is directly related to the system's capacity to improve the quality of its spending. If in 2007 the system spends the same amount per person covered as it did in 2006, another US\$52 million would be needed to fund 100% of the coverage provided. This gap would widen to US\$62.8 million in 2008 because the World Bank loan will be ending, and the shortfall would increase to US\$79.8 million in 2010 at the end of the grant from the Global Fund.

However, if per capita expenditure continues to rise at the same rate it did in 2006 (namely, 40%), paying for 100% coverage would create funding gaps of US\$82.7 million in 2007, US\$94.2 million in 2008, and US\$112.2 in 2010.

The evaluation confirmed that Dominican society has not fully assumed its role in addressing the problems associated with HIV. Response capacity continues to be limited because of the explicit exclusion of antiretroviral drugs in the Basic Health Plan. Moreover, the regulations of the Family Health Insurance program expressly state that financing the cost of these conditions is the responsibility of COPRESIDA and SESPAS. As a result of this policy, insurance coverage for HIV is totally dependent on the availability of the external resources such as those that are currently funding COPRESIDA.

Evaluation

Given this picture, it is incumbent on the health authority of the Dominican Republic to take drastic measures to ensure more efficient and effective use of the financial resources

that are available for addressing this problem. Such measures should consider the following areas:

- Leadership in addressing the problems associated with the epidemic;
- Response capacity of the Health System and progressive decentralization of HIV; care and integration into the health services network (in keeping with the reform processes currently under way);
- Identification of the most cost-effective interventions and their corresponding technical specifications. This information is crucial for reviewing and modifying the pattern of expenditures;
- Policy on financing and insurance.

The recommendations contained in this evaluation include both short-term proposals for 2007-2008 and medium-term proposals for 2007-2011 that can be reflected in the new National Strategic Plan on HIV, AIDS, and Other Sexually Transmitted Infections 2007-2015 (PEN), which was being prepared at the time of the evaluation. These recommendations were reviewed with the national team and served as the basis for a workshop on operational planning held on 12-13 April 2007 in Santo Domingo.

The proposed plan of operation has been delivered to SESPAS. Monitoring and follow-up are fundamental to achieving its desired impact, especially in light of the number of different agencies with primary responsibility for implementing the actions, as well as the need to harmonize and/or mesh them with the reorganization of SESPAS as part of the sectoral reform under way and the separation of functions that it entails.

In order to guarantee effective collaboration, it is proposed to create a national coordination team under the strategic management of the Secretariat of Public Health, which would have technical support from the following agencies: SESPAS, the Undersecretariat of Planning, the Institutional Development Unit (UNDI), and COPRESIDA. This team would manage and facilitate preparation of the 2007-2008 Plan of Action, as well its implementation, monitoring, and evaluation.

Strategic Pillars

The recommendations stemming from the evaluation identify the following strategic pillars and emerging priorities:

Strengthening of the comprehensive care network for persons living with HIV

- Increase the early capture of persons living with HIV;
- Increase PNRTV coverage by enforcing a zero tolerance policy (no child of a mother with HIV may be discharged from a hospital without having received the benefit of PNRTV);

- Implement a plan of action for strengthening the public network that provides HIV care and prevention services in the context of the sectoral reform under way and the separation of functions that it entails;
- Develop social participation and mobilization mechanisms for service delivery and social oversight.

Redefinition and expansion of prevention and health promotion strategies

- Revise the strategies and the technical content of prevention and health promotion interventions based on evidence as well as criteria of cost-effectiveness and administrative and financial sustainability;
- Take whatever steps may be necessary to terminate existing agreements between health facilities and religious or other entities that constrain the capacity to promote and implement family planning programs and promote the use of condoms;
- Define coverage goals for 2007-2008, develop an operational strategy for meeting these targets, identify resources, and set a timetable;
- Expand the work of primary care units to include the promotion of sexual health and prevention of HIV infection/STIs;
- Develop mechanisms that promote social participation and mobilization in prevention and health promotion.

Insurance, funding and sustainability for universal access

- Develop a plan of action to guarantee the insurance and sustainability of HIV treatment and prevention, and fully integrate the assurance of universal access to prevention, care, and treatment, while still meeting the criteria of cost-effectiveness and sustainability, as reflected in the policy and processes of health sector reform.

Leadership role, guidance, and management (progressive transfer of roles and functions in accordance with the reform and local realities, strategic management)

- Improve the quality of spending: review the action plans for the different projects and adjust investment so that it will meet the criteria of cost-effectiveness and sustainability;
- Take immediate steps to harmonize the reform process under way and implement the HIV/STI care model based on the criteria of cost-effectiveness and sustainability;
- Devote human and financial HIV resources to improving the quality of maternal and child care and the effectiveness of the PNRTV;

- Conduct a technical and economic evaluation of the initiative to create care units for pregnant women with HIV within maternal health care services (at the time of the evaluation, such a unit was in operation at La Altagracia Maternity). The results of this evaluation should guide the decision as to whether or not it is desirable for the country to replicate this model;
- Suspend the creation of new comprehensive care units (CCUs) in their current modality and develop a plan for integrating CCUs into the network;
- Articulate the existing CCUs into the different levels of the services network with clear referral and counter-referral mechanisms; enlist existing CCU infrastructure and human resources to facilitate this process and strengthen the network of services for comprehensive HIV care;
- Institute a zero tolerance policy with regard to stigmatization and discrimination within health facilities; provide mass training for health workers in the services network, assigning the highest priority to primary care, maternal and child care, and services for patients with increased risk (TB, STI). It is recommended that the IMAI methodology and instruments be used to support this process;
- Develop strategies for raising awareness and providing education to address the mistaken impression that HIV in the Dominican Republic is a problem “imported” by migrant populations, explaining the role played by population movements in HIV transmission both within the country’s borders and as people leave the country or arrive from elsewhere;
- Consolidate the processes under way to develop a binational strategy jointly with Haiti for optimizing current resources so that the migrant population on the island of Hispaniola will be guaranteed access to prevention, care, and treatment. As a basis for this binational process, it will be essential to develop a situation analysis of the island as a whole.

Strengthening of regulatory, auditing, and oversight capacity to support the leadership role at the national and territorial levels

Strengthening of SESPAS in its management of the National Health System response

- Utilize the results of the evaluation to strengthen the ongoing strategic planning processes (PLANDES and PEN), as well as operational planning projects both ongoing and in the early stages of development;
- Develop a plan of action to turn functions over to the appropriate agencies within the context of sectoral reform.

Strengthening of the management of drugs and supplies

- Analyze (SESPAS, jointly with COPPFAN) the feasibility of PROMESE/CAL taking over management of drugs from DIGECITSS in the medium term; if such a move is feasible, develop a plan of action for the transfer of functions;
- Take immediate steps to improve the planning and management of supplies: review inventory stocks and purchases made during the first half of 2007 so that any necessary adjustments can be made in the plan for the second half of the year; also, develop a plan to prepare for transition from the Clinton Foundation to an international purchasing agent in the near future in order to avoid any interruption in the supply of drugs;
- Strengthen drug regulation and quality assurance;
- Take steps to minimize the impact of intellectual property agreements, especially CAFTA, on access to drugs for the treatment of HIV, STIs, and opportunistic infections;
- Implement a strategy for the use of generic drugs in order to increase competition, lower prices, and ensure sustainability of treatments;
- Develop a plan for promoting the rational use of ARVs and drugs for STIs and opportunistic infections (OI), including implementation of a national drug surveillance program and ongoing monitoring of patient compliance through comprehensive patient care.

Strategic information to support management and decision-making (surveillance, monitoring and evaluation, and information systems)

- Strengthen monitoring and evaluation mechanisms to support the use of information by managers and decision-makers at all levels of the National Health System;
- Introduce the analysis of gaps, missed opportunities, and cost-effectiveness as an essential component of monitoring interventions at the national, regional, and local levels;
- Strengthen the analysis and use of existing information.

Introduction

In July 2006, the Secretary of Public Health and Social Welfare, Dr. Bautista Rojas Gómez, requested support from PAHO/WHO to lead an external evaluation of the performance of the Program on Sexually Transmitted Infections and AIDS directed by DIGECITSS with the purpose of *identifying the areas that need strengthening in order to improve the quality and expand the coverage of this service at the national level*. With specific instructions from the Director of the Organization, the Regional Program and the PAHO/WHO Representative Office in the country responded to this request.

In subsequent discussions between PAHO/WHO and the Secretariat of Public Health and Social Welfare (SESPAS), it was agreed to use a more comprehensive approach that would go beyond a specific review of the DIGECITSS program and make it possible to conduct a systematic and comprehensive overview of the National Health System (SNS) response to the HIV epidemic.

This approach was prompted by the urgent need to strengthen health systems and services and ensure their sustainability in order to meet the goal of universal access to prevention, care, and treatment – all within the context of national health sector reform and redefinition of the National Health Plan (PLANDES) and the National Strategic Plan for HIV/AIDS (PEN).

Despite extensive PAHO/WHO experience in program evaluation, especially under the Expanded Program on Immunization (EPI) and the Tuberculosis Program, when the request was presented, the Organization did not have any instruments or methodologies for conducting this type of evaluation and it had not undertaken any recent evaluations on the subject of HIV. However, its 2006-2015 Regional Plan for the Control of HIV/STIs identified undertakings of this type as one of the priority areas to be supported: Critical Line of Action 2, Strengthening of National HIV/STI Programs, recognizes the evaluation of programs as a strategic approach for improving analytical and strategic planning capacity within the National Health Program.

Thus, the decision of Dominican health authorities to request technical cooperation from PAHO/WHO for an external evaluation of its National Health System turned out to be a privileged opportunity for the Organization in more than one way. It offered the opportunity not only to:

- Lend technical support for the HIV situation in one of the priority countries of the Region

but also to:

- Start developing regional guidelines that could serve as a reference and be used by other countries to assist in strengthening their response capacity, depending on their particular needs for technical cooperation. Thus, the experience of the

Dominican Republic has turned into a “pilot” event not only for that country but also for the Region and at the global level.

Furthermore, the need for a participatory and highly collaborative process was recognized, and this experience was therefore identified as an opportunity to strengthen interprogram and interagency coordination and collaboration at the country, regional, and global levels. From the beginning, cooperation was available at the regional level from UNICEF and the World Health Organization’s Department of HIV/AIDS. Cooperation with UNICEF was fundamental for learning about the experiences of Guatemala, Honduras, and Panama in carrying out joint evaluations of their programs for the prevention of mother-to-child transmission (also called “vertical transmission”) in 2006.

The PAHO/WHO Regional Program also enlisted the cooperation of other technical units, which provided the expertise needed to gain an overview of the situation. At the country level, interprogram and interagency collaboration was developed through the participation of the various agencies involved in coordinating and managing the response to HIV under the political and strategic leadership of the office of the Secretary of Public Health and the PAHO/WHO Representative in the country.

Technical management was provided by DIGECITSS and the PAHO/WHO and UNICEF technical teams. The broad participatory national process also had support of the United Nations Theme Group and its Secretariat (UNAIDS), other international agencies such as USAID, and several programs under the auspices of SESPAS, COPRESIDA, NGOs, and networks of persons living with HIV (Annex 1).

The present document embodies the elements of the evaluation process, including the relevant background, scope, purposes, conceptual framework, basic content, findings, and short- and medium-term recommendations.

It is important to point out that at the time this report was published, SESPAS and its agencies had already initiated numerous activities to facilitate the implementation of the short-term recommendations of the evaluation, including a workshop on operational planning. This report was also at the disposal of those who participated in the review and reformulation of the PEN.

Since there has been little international or national experience so far with a comprehensive evaluation of a Health System’s response to HIV, the exercise conducted in the Dominican Republic is bound to become a regional and international reference.

1. The Evaluation

1.1. Scope

Monitoring and evaluation should be part of an overall system that is articulated with, and based on, decision-making processes. However, evaluation, unlike monitoring, refers primarily to the results and impact of the policies, strategies, and interventions which together make up the National Health System's response. Thus, it tends to be more closely tied in with strategic planning and decision-making about policies and strategies than with the more typical managerial aspects of project or program development.^{1,2}

The evaluation presented in this report has focused on characterizing the epidemic and its trends and on analyzing the response delivered by the Dominican National Health System. Performance was assessed in terms of cost-effectiveness using an approach that sought to analyze the level and breakdown of expenditures and the results achieved relative to the goals or expectations. As reference points, the evaluation team looked at the targets set by the country and the goals contained in the international agreements it has signed.

Additionally, the evaluation identified strengths and weaknesses, as well as opportunities and significant risks, and it highlighted the challenges that currently need to be addressed in the country's strategic planning process in order to meet the proposed targets.

The following objectives were identified for the evaluation process:

1.1.1. Overall Objective

Analyze the magnitude and appropriateness of the National Health System's response to HIV/STIs in terms of effectiveness, resources allocated, achievement of national goals, and fulfillment of the commitment to universal access for the prevention, care, and treatment of HIV.

1.1.2. Specific Objectives

- Identify any existing shortfalls in meeting the established national targets.
- Identify the factors in the national political and strategic context that limit the implementation of universal access.

¹ Family Health International. Evaluating Programs for HIV/AIDS Prevention and Care in Developing Countries: A Handbook for program Managers and Decision Makers. 2001.

² Family Health International, IMPACT, USAID. Monitoring HIV Programs. Monitoring and Evaluation. Training Guide. Boston. 2004.

- Identify the strengths and opportunities that would make it possible to rapidly increase the National Health System's effective response in bridging the gaps that exist.
- Contribute to the strategic planning and management of the national response and the harmonization and effective allocation of resources.
- Contribute to strengthening the National Health System's leadership and management role in addressing the opportunities and challenges associated with health sector and social security reform that could have a potential impact on HIV.
- Provide short- and medium-term recommendations to support decision-making so that it will be possible to improve results and make an impact on the National Health System's response to the HIV situation at its different levels.

1.2. The Evaluation from the National Perspective

The external evaluation has been an opportunity for joint reflection by the authorities and personnel responsible for leading and carrying out the Health System's responses to HIV. Despite the experience and capabilities, not to mention the external viewpoint, that technical cooperation brings to the table for the evaluation requested by the authorities, in reality, the process was not "external" to the Health System's organizations and personnel; it was an essentially internal, participatory process aimed at strengthening national institutions and operations. The external evaluation team acted as facilitators of this process, providing an overview and pulling information together from different sources, along with the perspectives and contributions of different stakeholders.

Far from being a threatening act, from the national standpoint, the evaluation turned out to be an opportunity that led to the empowerment of the Health System's various stakeholders and organizations, and it also served to strengthen evidence-based decision-making and planning within the National Health System.

The evaluation is part of a predominantly strategic exercise that supports development of the National Strategic Plan for HIV/AIDS and adaptation of operational plans based on the findings and short-term recommendations.

Lastly, the evaluation offers an opportunity to strengthen institutional development within the National Health System – that is, all the public, private, nongovernmental, and socially based organizations which, under the leadership of SESPAS, are responsible for addressing the health situation of the population (General Health Law 42-01).

1.3. The Evaluation from the Perspective of PAHO/WHO and Other Cooperation Agencies

PAHO/WHO and the United Nations agencies, including the UNAIDS Secretariat, recognize that evaluation is an important component of health cooperation. Other agencies – such as USAID – share the same perspective. Therefore, the experience of the Dominican Republic provides an opportunity to develop proposals and methodologies

that will be applicable in other interested countries, as well as to strengthen internal capabilities and technical cooperation processes.

It is also an opportunity to strengthen networks of people and organizations (“communities of practice”) that are interested in evaluating national health responses to the HIV epidemic.

The evaluation also provides useful information for strengthening and reorienting other technical cooperation for the Dominican Republic in the health area, especially from the standpoint of sustainable development. And finally, it is an opportunity to focus on harmonizing and improving the country’s current technical assistance processes in the health area, as well as its management of the HIV situation.

1.4. Conceptual Aspects

External evaluations of national health programs have made a significant contribution to their development and strengthening. Most of the experience in the Region of the Americas has been related to national immunization programs³ and national tuberculosis programs⁴ (the former since the 1980s and the latter since the 1990s).

In both cases, external evaluation methodologies were available and have been steadily improved, incorporating experience as it is gained and adapting them to specific countries and specific circumstances. UNICEF, WHO, and UNAIDS have recently developed evaluations of programs for the prevention of mother-to-child transmission. A review of these experiences was very useful for the preparation of this external evaluation of the Health System’s response in the Dominican Republic.

Although PAHO/WHO and other agencies had conducted numerous evaluations of the various components and programs that constitute the national response to HIV in different countries, the only experience with a comprehensive external evaluation of the National Health System response was a recent exercise in Thailand.⁵ A review of that experience also proved to be very useful in the present evaluation.

The conceptual frame of reference for the current evaluation is based on two areas of analysis: the functions of the National Health System, and the technical and operational components of the Health System’s response to HIV. As pointed out earlier, the Health System response has not been limited to the Secretariat of Public Health and Social Welfare, although that entity did assume a leadership role. Also, in the Dominican Republic the health system landscape is dominated by the move to decentralize health

³ Organización Panamericana de la Salud OPS/OMS. Metodología para la evaluación multidisciplinaria del Programa Nacional de Inmunizaciones a nivel de país. Washington, October 2000.

⁴ World Health Organization. Kumaresan J, Luelmo F & Smith I. Guidelines for conducting a review of a national tuberculosis. Geneva, 1998.

⁵ World Health Organization. SEARO/Ministry of Health, Government of Thailand. External review of the health sector response to HIV/AIDS in Thailand. New Delhi, India, August 2005.

care services and organize them into comprehensive health care networks that will have an increasing degree of administrative autonomy.

These health responses are enshrined in the National Strategic Plan for HIV/AIDS and are part of the expanded responses coordinated by COPRESIDA with other public and nongovernmental sectors. Thus, it can be assumed that the health system response to HIV occurs in a complex institutional environment that is transitioning toward organizational management and care models that have yet to be fully defined.

To facilitate classification of the various components that constitute the health system response to HIV, and to make it easier to incorporate the conclusions and recommendations of this evaluation into the health sector and social security reform processes currently under way in the Dominican Republic, the evaluation has adopted the structure of health system functions currently recognized by law, which has also been assumed in the most recent draft of PLANDES 06-15. Table 1 shows how these health system functions and issues cross-cut the technical and operational aspects of the response to HIV/STI.

Table 1. Matrix of health system functions and components of the response to HIV					
Technical and operational components of the response to HIV/STI	Functions of the National Health System (SNS)				
	Leadership role, management, and direction	Care (including comprehensive care of adults, children, adolescents, and PNRTV)	Public health (health promotion and prevention of HIV and other STIs)	Insurance	Financing
Human resources					
Information system and epidemiological surveillance					
Social participation					
Gender-based approach					

The information that went into this matrix of health system responsibilities and duties are specifically related to the health system response to the HIV epidemic.

Since the health system response involves a large number of interventions and takes place in different areas, the evaluation looked at all three levels of the system – national, regional, and provincial – and it studied establishments at different levels of care as well as in different communities and populations, depending on the levels of aggregation defined by the Health System.

1.5. Methodology and Instruments

It is important to note that development of the methodology, guides, and instruments for the evaluation was an integral part of the process. During the first week, the proposal offered by a group of PAHO/WHO consultants was adopted as the initial starting point, and after some discussion and refinements, the data collection instruments were finalized. Those discussions were essential to standardizing the criteria.

The methodology placed special importance on a highly participatory process involving external consultants, national professionals from different areas, managers, technical representatives of the different agencies, NGOs, and persons living with HIV.

An interdisciplinary, interprogrammatic team was created drawing on the following areas of specialization: epidemiology, health systems and services, health economics, infectious diseases, monitoring and evaluation, strategic planning and management, prevention of mother-to-child transmission, public health, drug management and policy, and human resources.

For the analysis, the evaluation team not only met as a whole but also broke into subgroups to talk with managers and decision-makers, representatives of the cooperation agencies, and coordination focal points, such as the Global Fund's Country Coordinating Mechanism (CCM). Shortly before the report was finalized, six meetings were held to discuss the preliminary results, and an operational planning session was organized to facilitate the implementation of results.

During the evaluation, both quantitative and qualitative techniques were used in the collection and analysis of data as well as the consultation of secondary sources. In addition, the team reviewed recent documentation prepared by the country in conjunction with international cooperation activities. In order to ensure that data collection efforts were not duplicated and the information gathered this time would be compatible with past studies, a set of documents was compiled and used as references, including reports on monitoring and evaluation exercises, specific interventions, and situation analyses conducted in 2004, 2005, and 2006.

In this sense, the following areas were identified as being of special interest: the evaluation of the National Program for the Reduction of Vertical Transmission (PNRTV) conducted by UNICEF in 2004; the evaluation of the epidemiological surveillance system and laboratory network conducted by CDC in 2006; and evaluations and consultancies carried out by PAHO/WHO in 2006 (evaluation of the Tuberculosis Program and consultancies on collaborative TB/HIV activities and safe blood supply).

In addition to these references, information was collected from interviews with key informants (a total of 20 interviews); discussion groups (with NGOs, persons living with HIV, and users of PNRTV services); structured surveys (administered to 24 users during visits to health facilities); an analysis of strengths, weaknesses, opportunities, and threats (SWOT); and field visits with structured interviews at 8 Regional Health Directorates of

Health (DRSs), 11 Provincial Health Directorates of Health (DPSs), 4 Health Areas, 18 hospitals, 28 primary care units (UNAPs), 6 comprehensive care units (CCUs), 11 NGOs, and 3 *bateyes* (housing developments for sugarcane workers).

This type of analysis alone was not considered to be exhaustive. Whenever possible, a small group of “trace” indicators were used to capture the most important aspects of each component being evaluated. It is important to point out that there were limitations in terms of the timeliness and quality of the information available, especially data on expenditures, number of patients, and the distribution of patients by first- and second-line treatment. These limitations reflected the fragile state of the information system and hindered the analysis.

It is important to point out that the gaps and missed opportunities, especially the cost of missed opportunities and funding gaps, are prime examples of the types of elements that should be analyzed in reporting on health system performance. The methodology and criteria taken into account could prove to be critical information in future evaluations as critical information becomes increasingly available for the calculations (i.e., information on costs of the various elements that go into the interventions, out-of-pocket expenditures, etc.).

2. The National Context

The Dominican Republic occupies two-thirds of the island of Hispaniola, which it shares with the Republic of Haiti. It is the second largest country of the Antilles Archipelago in the Caribbean Sea. Its area is 48,442 km² and its population was estimated at 8.9 million in 2005.⁶ The Population Census of 2002 reported 8,562,541 registered citizens: 50.2% females and 49.8% males. The population density is 176.8 inhabitants per km², with 64% of the population living in urban areas. The country is made up of 31 provinces and the National District.

2.1. Situation of the Economy and Social Development

The economic context is favorable for addressing the challenges of the epidemic. Indeed, the Dominican economy has shown high growth rates in recent years. The gross domestic product (GDP), a measure of increased available resources, grew by 9.3% in 2005 and 10.4% in 2006.

According to the Central Bank and the Economic Commission for Latin America and the Caribbean (ECLAC), this growth has some promising characteristics because it is driven by capital spending, and the expansion is broadly supported by the production of goods compared with only a small proportion coming from services. This situation has had a

⁶ CELADE/CEPAL. Total population of the countries, http://www.eclac.cl/celade/proyecciones/basedatos_BD.htm.

positive effect on the job market: for the first time in three years, the unemployment rate showed a decline.

A high rate of inflation is traditionally considered an indicator of inequity because it forces the lower-income population to spend a larger share of their income on consumption. In 2006, inflation in the Dominican Republic was only 5%, down from 7.44% the year before.

A bulletin from the country's Central Bank (BCRD) claimed that the low rate *is a clear sign that it has been possible to bring this economic scourge under control in the last two years, down to single digits, after reaching 52% in August 2004 and 29% in December of the same year.*

The tourism sector has reported an increase of the number of visits (3.9 million in 2006). While this development is good news in terms of foreign exchange, it also underlines the need to strengthen prevention activities as they relate to the influx of tourists. Another important resource for dealing with the epidemic is the current account of balance of payments – i.e., the measure of net availability of foreign exchange in the country – which performed slightly better than anticipated as a result of increased exports and oil prices that were lower than had been expected.

In January 2007, the government's economic team reported to the International Monetary Fund (IMF) that its monetary targets for 2006 had been met, although there had been some difficulty in meeting fiscal objectives because of reduced tax revenues in some areas and the need for priority spending in others, especially on infrastructure. In 2006 the Dominican Republic signed the United States-Central America-Dominican Republic Free Trade Agreement (CAFTA). When CAFTA goes into effect in 2007, growth is expected to reach 6%.

In terms of social development, economic growth had little impact on social investment and human development.⁷ The percentage of urban poor rose from 47.9% in 1992 to 66.5% in 1999 (ONAPLAN), and public investment in social development (education, health and social welfare) remained at 5% of GDP (UNDP).

The country has extreme inequities in the distribution of income. In 2002, the richest 20% of the population received 53% of the gross income, while the poorest 40% received only 14%.⁸ In 2003, banking fraud resulted in losses equivalent to 20% of the GDP. The government decided to defray the depositors' loss, which led to a quasi-fiscal deficit and caused inflation to soar to 42.7%. The economic and social crisis affected tourism, duty-free zones, and construction – all key pillars of the country's economy. The GDP saw a drop of 0.4%.

⁷ PNUD, Informe Nacional de Desarrollo Humano, República Dominicana, 2005.

⁸ UNICEF, The State of the World's Children 2005.

The GDP ranged between US\$ 21,714.6 million in 2002 and US\$ 29,333.2 million in 2005. Social public spending has been traditionally low and accounted for only 6.8% of GDP in 2003. Public spending on health was 1.9% of GDP in 2002 and declined to 1.7% in 2003 and 1.2% in 2004. For 2006, SESPAS Health Accounts Unit estimates that it will be 1.9%. This explains the health services' high out-of-pocket expenditure (66% according to the Central Bank and the UNDP National Report on Human Development).

In 2000, 54% of the population was living in poverty, and 28% was living in extreme poverty. By 2003 this situation had worsened, with 62% of the population living in poverty and 33% in extreme poverty. Poverty in the Dominican Republic is widespread: in absolute terms, according to ONAPLAN data for the year 2002, the concentration of households and people living in poverty was greatest in the provinces of Santo Domingo, Santiago, San Cristóbal, and the National District. In terms of percentages, the provinces with the highest poverty levels were Elías Piña (82.4%), Bahoruco (75.6%), Monte Plata (73.3%), San Juan (70.4), Independencia (70.2%), and El Seibo (70.2%).

In 2003, 17% of the economically active population (EAP) was unemployed. This figure rose to 18.4% in 2004 and stood at 17.9% in 2005.⁹ In terms of wage parity, women typically earn 30% less than men – in some cases as much as 41% less, as seen in the duty-free zones and tourism sector¹⁰ – even though the educational status of women is higher (Demographic and Health Survey – ENDESA).

According to the UNDP, between 1991 and 2003 every 1% of growth in the GDP saw a 0.65% increase in employment. In 2005 the GDP rose 9.3%, but job creation was low, the quality of jobs was poor, wages were small, and social benefits were often unavailable (Central Bank).

Between 1996 and 2002, illiteracy in the population 10 years and older declined from 15% to 13%. The rate was lower for women (12%) than for men (13%), and it was lower in the cities (9.5%) than in rural areas (19%). During this period the proportion of people without basic education dropped from 20% to 10%, and secondary or university education increased from 25% to 30%. Of the children who enter the first grade, only 50% complete 4 years of elementary education, 22% complete the eight-year cycle, and only 10% complete secondary school (Informe Nacional de Desarrollo Humano, 2005). A factor contributing to the dropout rate is teen pregnancy: 19% of all adolescent girls have had a child, and 23% have been pregnant at some time.¹¹

⁹ Banco Central de la República Dominicana. Encuesta Nacional de Fuerza de trabajo. Disponible en: http://www.bancentral.gov.do/estadisticas_economicas/Mercado_de_Trabajo/tasa_desocupacion_anual.xls

¹⁰ Banco Central de República Dominicana. Encuesta Nacional de Fuerza de Trabajo.

¹¹ CESDEM, SESPAS, CERSS, USAID, MACRO. Encuesta Demográfica y de Salud 2002. Santo Domingo, Octubre 2002

2.2. Situation of the Health System

The Dominican Republic is one of the 191 countries that signed the Millennium Declaration in 2000, thus assuming the commitment to comprehensively address the essential needs of the population, promote equitable and sustainable development, and uphold the principles and fundamental values of human rights that are considered necessary for achievement of the Millennium Development Goals (MDG).

In 2001, two major laws were passed that marked the new direction of the National Health System: the General Health Code (42-01) and Law 87-01, which created the Dominican Social Security System. The General Health Code calls for separation of the three main functions – namely provision of services, the leadership role, and financing of the system; it creates the National Health Council as the national consensus-building organ for health; and it lays the foundation for regulating public health services and dealing with threats to health. Under this law, SESPAS is responsible for policy-making, the development of 10-year national health plans, regulation and management of the sector, monitoring and development of public health, and performance of essential public health functions.

Low public spending on health, combined with the system's tenuous financial underpinnings, have resulted in high out-of-pocket expenditures (approximately 66% of total expenditure on health) and therefore a high degree of exclusion. In 2002, 50.8% of those who consulted outpatient services and 58.8% of hospitalized patients had to pay 100% of their costs out of pocket, at an average of US\$29.05 per visit and US\$197.35 per hospitalization.

Appropriate implementation of the legislation in place should reduce the economic impact of the disease burden on poor families and the population in general. A number of sectors agree on the need to review and revise this legislation so that its implementation is consistent with the guiding principles that have been adopted. It should give users free choice of insurer and provider, allow for collective financing among different programs, ensure greater citizen participation, reduce segmentation, guarantee funding, minimize fragmentation in the delivery of services, and reduce high intermediation costs.

SESPAS, which has had the dual role of both service provider and steering agency, operating the largest network of health care services and programs, now faces the task of adapting its organizational structure in light of the new functions.

At the time of the evaluation, SESPAS was in the process of formulating the 10-Year Health Plan 2006-2015 (PLANDES 06-15).¹² The overall purpose of this effort, first begun in 2004 and resumed in 2006, is to make the National Health System and the Family Health Insurance program universal. It assumes the following basic functions for the National Health System: a leading role, provision of health care for individuals,

¹² SESPAS, CERSS, INTEC.- Plan Decenal de Salud 2006-2015 (draft updated for extended consultation). Santo Domingo. November 2006.

public health, universal insurance, and financing (as set forth in Law 42-01). Additionally, the Health System is assigned objectives in four cross-cutting strategic areas: human resources, epidemiological and management information systems, transversalization of the gender approach, and social participation.

2.3. Drug Policy and Regulation

In the area of drugs, the country has developed a broad political and regulatory base and it has structures in place that enable it to develop a good pharmaceutical system. The main areas of progress are described below.

The Presidential Commission on Pharmaceutical Policy was created to develop a policy to regulate the national pharmaceutical sector and establish a strategy to get all stakeholders in the pharmaceutical sector to focus their efforts on ensuring that the Dominican population receives essential and/or generic drugs that are of good quality, effective, and affordable by all.

The National Pharmaceutical Policy (PFN), formulated in 2005, assumes the commitment, among other objectives, to ensure that the entire population of the Dominican Republic has access to drugs and health products, particularly essential drugs of importance for public health and the Family Health Insurance program.

In the area of regulation, the Directorate General of Drugs and Pharmacies (DGDF) was identified as the agency within SESPAS that is responsible for establishing and enforcing public health regulations on drugs for both the public and private sector.

With regard to quality control, work on rebuilding and equipping the National Public Health Laboratory, as well as training its personnel, was initiated in 2000. The Laboratory is currently seeking to become certified under ISO 17025 (the main standard for certifying analysis or calibration laboratories) and prequalified by WHO as a reference laboratory for drug quality control.

There are standards of Good Pharmaceutical Manufacturing Practice in place that support the DGDF in its supervision of both national industries and those backed by foreign capital. The objectives of these standards are to guarantee the quality of pharmaceutical products manufactured in the country, safeguard compliance with the regulations, and offer advisory services to the industry as appropriate.

Management of the drug supply is the responsibility of PROMESE/CAL, the Logistical Support Framework of the Essential Drug Program, which has been being built up since 2000. Its area of responsibility has been extended to include all government health sector institutions, the Social Security System, and the Armed Forces.

In 2005, the country began to participate in the Strategic Fund, a mechanism created by PAHO to provide technical assistance and purchase essential drugs and other strategic public health inputs on behalf of the countries. The drugs used for HIV and opportunistic

infections, as well as reagents for assessing CD4 and viral burden, are on the list of items purchased by the Fund.

Most of the SESPAS hospitals, regardless of their level of complexity, have a popular pharmacy that comes under the organizational and functional jurisdiction of PROMESE/CAL.

The management of drugs is governed by the country's general legislation on the circulation of drugs (Decree 246-06, as amended by Decree 625-06) and on public sector purchasing (Law 340-06, as amended by Law 449-06), which covers the purchasing of goods and services and contracts for construction and concessions.

In 1984, based on WHO's recommendations, the first basic list was compiled and published as the Basic List of Essential Drugs (CBM). In 1993 the National Commission on the Basic List of Essential Drugs, under SESPAS, was entrusted with responsibility for the selection of essential drugs. The latest version of the CBM, dated June 2005, listed 468 drugs and 871 dosage forms for use nationwide at the different levels of primary and specialized care.

In 2005, SESPAS created the Drug Information Center, a scientific and technical body that is responsible for providing support for the preparation and dissemination of objective information on drugs for both health professionals and the general public.

2.4. Health Insurance

Law 87-01 of 11 May 2001 created the Dominican Social Security System (SDSS) and entrusted it with responsibility for providing insurance under the direction of the National Social Security Council (CNSS).^{13,14} This law specifies the sources and mechanisms for funding health care provision by the National Health System. It relies on compulsory prepaid contributions, which are calculated on the basis of the individual's ability to pay and employment status. The SDSS guarantees insurance for the country's poor and indigent population.

The law also introduces compulsory and universal Family Health Insurance (SFS), which includes a Basic Health Plan for each of the three established payment schemes (contributory, contributory-subsidized, and subsidized).

The law further states that all Dominican citizens and legal residents in the national territory have the right to be affiliated. The SDSS is organized according to specialization and separation of functions. The State has the exclusive and inalienable responsibility to direct, regulate, finance, and oversee these functions, while risk management and

¹³ Secretaría de Estado de Trabajo. Ley 87-01. Sistema Dominicano de Seguridad Social. Santo Domingo 2002.

¹⁴ Secretaría de Estado de Salud Pública. Ley General de Salud 42-01. Santo Domingo 2001.

provision of services are the responsibility of public, private, or mixed sector institutions that have been duly accredited by the competent public authority.

With regard to health protection, all beneficiaries are covered by the Family Health Insurance program, and they also have old-age, disability, and survivors' benefits; but workers' compensation for job-related injuries and occupational diseases is available only to participants in the contributory regime.

2.4.1. Family Health Insurance

The Law creating the SFS states that the aims of the insurance are to provide comprehensive physical and mental health protection for members and their families; achieve universal coverage without exclusion by reason of age, sex, social status, employment, or residence; guarantee regular access by the most vulnerable groups of society; and ensure financial balance by rationalizing the cost of the benefits and the demands of administering the system.

The insurance covers health promotion, preventive medicine, treatment of diseases, rehabilitation, and services associated with the risks of pregnancy, childbirth, and the consequences thereof. It does not include treatment of injuries resulting from traffic accidents, which are covered by Compulsory Motor Vehicle Insurance, or work-related injuries or occupational diseases, which are covered by Workers' Compensation.

Beneficiaries have access to the Basic Health Plan, which the SDSS is gradually and progressively guaranteeing to the entire Dominican population regardless of their social condition, employment, economic status, or payment scheme under which they are covered. This plan is comprehensive and includes the following services (from the list of benefits approved by the CNSS):

- Health promotion and preventive medicine;
- Primary health care, including emergencies, outpatient and in-patient services, maternal and child care, and outpatient pharmaceutical services;
- Specialized care and complex treatment following referral from primary care, including emergency care, outpatient care by specialized physicians, hospitalization, drugs, and surgical care;
- Biomedical diagnostic procedures, including both laboratory tests and radiological examinations, whenever indicated by an authorized professional;
- Pediatric and preventive dental care (specific procedures to be itemized in a list of benefits established by the CNSS);
- Physical and rehabilitation therapy when prescribed by a specialized physician, based on criteria specified by the CNSS;
- Supplementary benefits, including medical equipment, prostheses, and technical assistance for disabled persons.

The National Social Security Council (CNSS) has approved a list of services covered by the Basic Health Plan, which also indicates specific exclusions. HAART is on the list of exclusions.

3. Analysis of the Situation

3.1. Extent of the Problem, Trends, and Characterization of the Epidemic

Based on an analysis of the information collected through epidemiological surveillance systems and other sources available in the country, it can be said that, even though the HIV trend has become relatively stabilized over the last ten years, it has increased by more than 1% in the sentinel surveillance system for pregnant women (1.5% in 2004 and 2.3% in 2005). Trends in the primary mechanisms of transmission have been based on the situation as of 2002. The predominance of sexual transmission is confirmed.

The data from the surveillance system for monitoring HIV in the Dominican Republic show that the epidemic has spread to all levels of society, with an overall downward trend among sex workers over the last 10 years but with no data available for the last five years.

In terms of categorizing the epidemic, prevalence rates of over 1% observed in pregnant women suggest that it has become widespread, while at the same time vulnerable populations and those engaging in high-risk behavior continue to play an important role in the transmission of HIV. Three determinants are key to HIV transmission among the vulnerable and high-risk behavior groups:

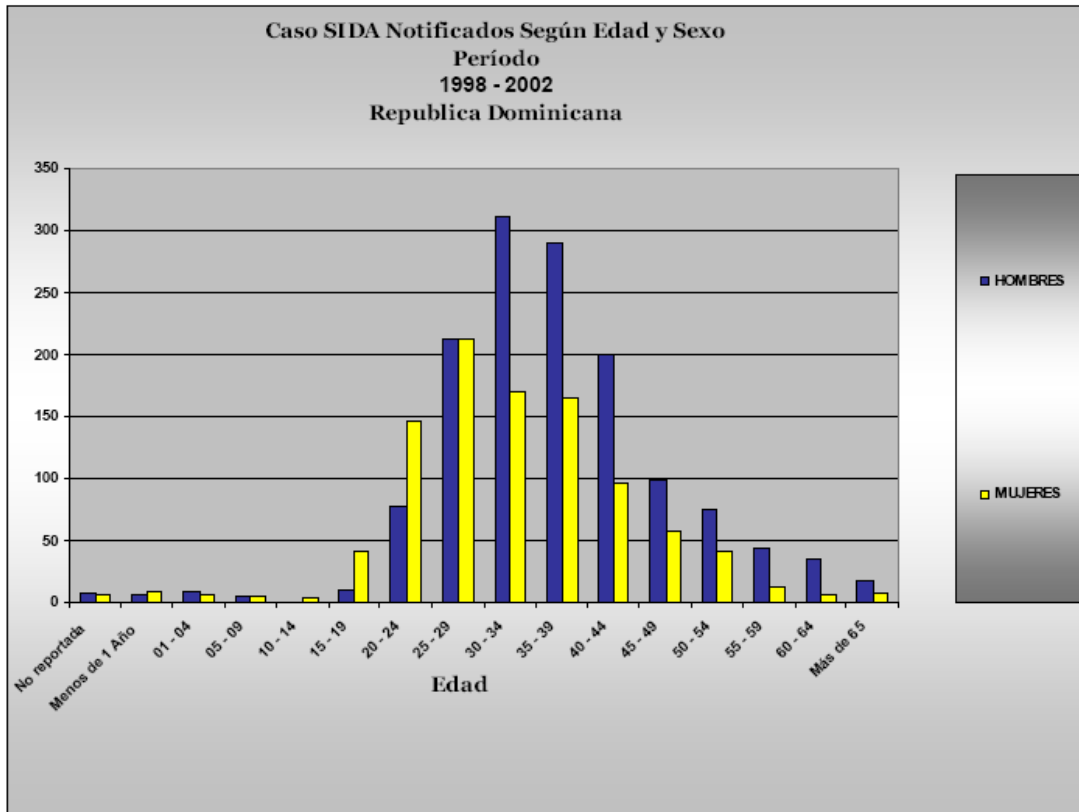
- Level of the infection in these populations, with prevalence rates higher than the rates observed in pregnant women;
- The size of these populations, which can range from several thousands in groups such as men who have sex with men (MSM) to hundreds of thousands in the case of migrants;
- Degree of interaction between these population groups and the general population at lower risk for infection – for example, the majority in the MSM group state that they have had sex with women as well.

The focus of the AIDS epidemic in the Dominican Republic has been shifting toward young women 15 to 30 years old – the age bracket that corresponds to women’s years of greatest reproductive activity (Figure 1). Although it could be argued that the predominance of females with HIV-related illness in the 15 to 24 age group may be due to increased screening in these groups, the evidence from the sentinel surveillance program also points toward rapid “feminization” of the HIV epidemic in that age range compared with the population 25 to 49 years old (Figure 2).

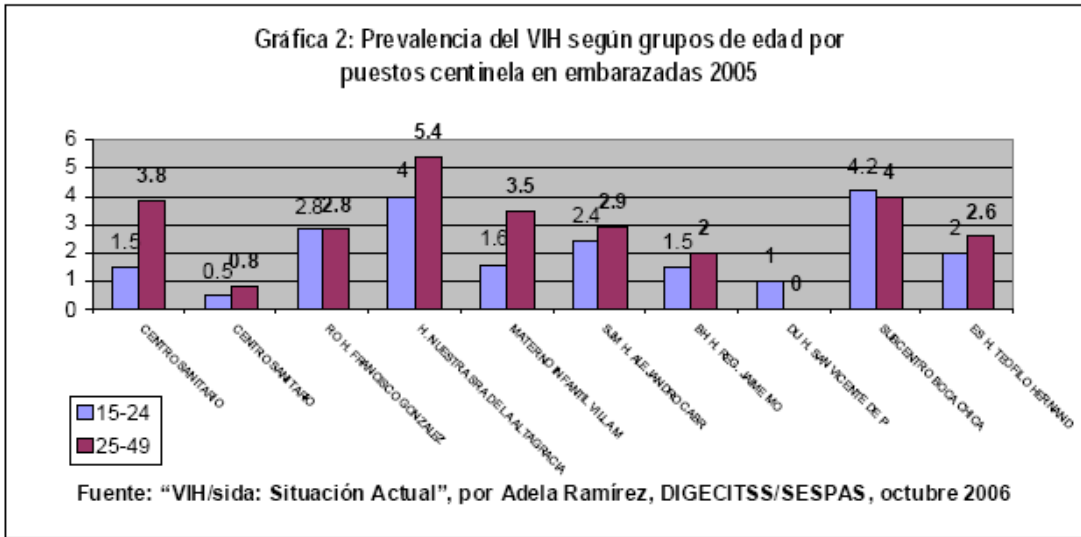
The 10 sentinel posts studied in 2005 had markedly different geographical characteristics. The three highest prevalence rates in pregnant women 15 to 24 years of age were observed at the following sites:

- 4.2% at the Boca Chica Substation, with a higher rate for pregnant women 15 to 24 years old than for those 25 to 49 years (4.0%).
- 4.0% at Nuestra Señora Altigracia Hospital, a sentinel site where the rate was highest for pregnant women 25 than 49 years of age (5.4%).
- 2.8% at Francisco Gonzalvo Hospital, where the rate was the same for pregnant women in both age groups, 15 to 24 years and 25 to 49 years: (2.8%).

Gráfica 1: Casos sida notificados según edad y sexo, 1998-2002, República Dominicana



Fuente: "VIH/sida: Situación Actual," por Adela Ramírez, DIGECITSS/SESPAS, octubre 2006

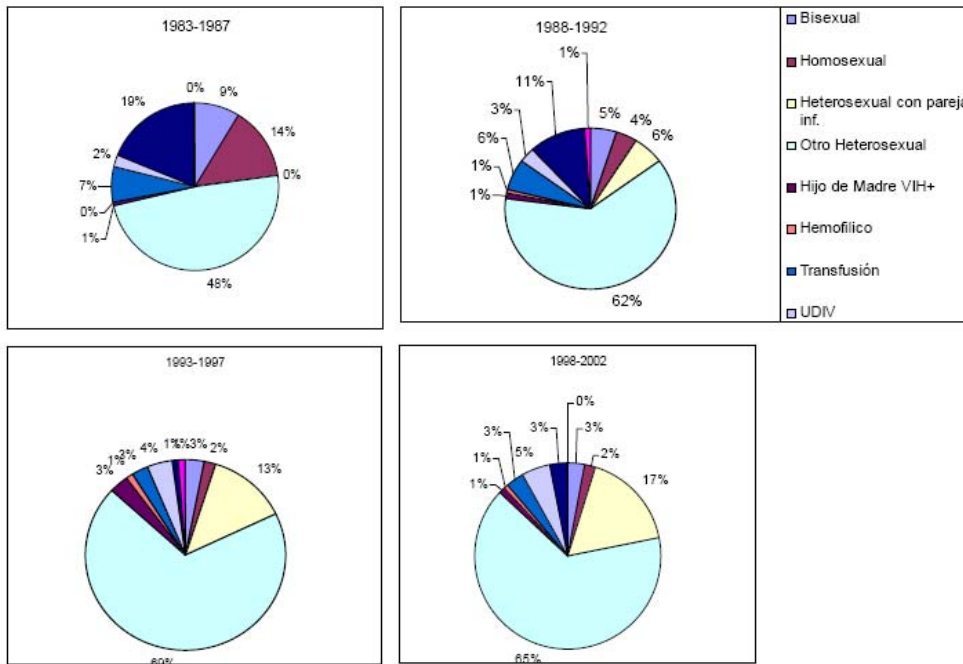


The prevalence of HIV infection in pregnant women 15 to 24 years old could be interpreted as a rough approximation of the incidence of new cases, since the prevalence of HIV in children under 15 is minimal and mortality between the ages of 15 and 25 is very low. On the other hand, the prevalence of HIV in pregnant women aged 25 to 49 could be interpreted as a rough approximation of the sum of the prevalence in the population under 25 plus the incidence of new cases in the 25 to 49 age group, not counting mortality in the latter population.

The data from the sentinel surveillance system, coupled with the reported cases of AIDS by sex and age, point to epidemiological characteristics that make it possible to state that HIV transmission rates are highest among females, adolescents, and young adults, whose risk probably begins in preadolescence.

Other disturbing evidence of the dynamics of the HIV/STI epidemic in the Dominican Republic comes from an analysis of the breakdown of reported AIDS cases by risk factor over time (Figure 3). Although sexual transmission has predominated, the increase in the proportion of AIDS cases associated with intravenous drug use (IDU) is also troubling, having risen from 2% of all AIDS cases at the beginning of the epidemic to 5% over the period 1998-2002. In these five years, IDU surpassed cases associated with both the bisexual (3%) and homosexual (2%) risk factors. IDU has the potential to rapidly increase the risk of infection among adolescents and young adults of both sexes and thus aggravate the rate of mother-to-child HIV/STI transmission in the country.

Grafica 3: Caso sida según factor de riesgo por quinquenio



Fuente: "VIH/sida: Situación Actual", por Adela Ramirez, DIGECITSS/SESPAS, octubre 2006

There also continues to be unacceptable levels of prevalence associated with blood transfusions (3%) and the hemophiliac population (1%). Although some of the transfusion-related AIDS cases in the hemophiliac population might have been caused many years ago, it is also possible that the infections are more recent, which could be indicative of problems in the application of basic controls in blood banks and blood product markets.

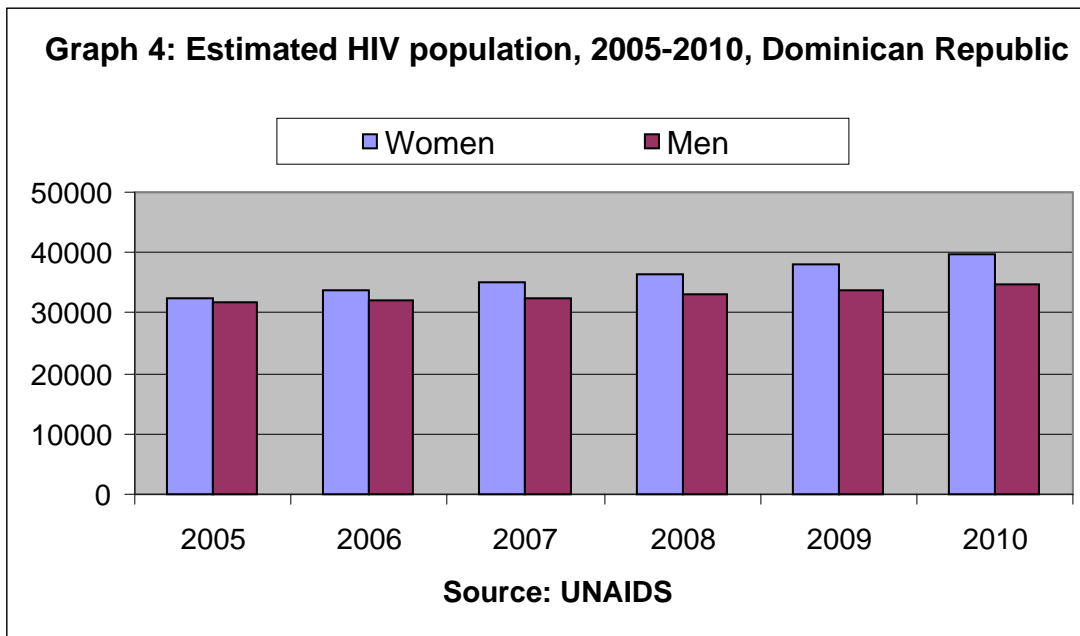
It is very important to remember that the HIV/STI situation described above, based on the data available, may barely be "the tip of the iceberg." These figures do not reflect the situation of population groups that become "invisible" because they do not have access to the health services network. The statistics only count the people who have access to services where AIDS cases are detected and reported, which form the basis for the sentinel surveillance data.

Finally, it is not enough to know that preadolescent girls, adolescents, and young adults are at high risk for HIV/STI. In order to implement effective interventions that will have an impact on the problem, it is essential to understand the characteristics of transmission and the dynamics and interactions between the actors in these risk scenarios. The Demographic and Health Survey (DHS) has helped to improve understanding of this subject through surveys of knowledge, attitudes, and practices in adolescents and the adult population in general. The information gained can make it possible to analyze the

socioeconomic determinants and factors that govern HIV/STI transmission. It would be desirable to undertake this kind of analysis in the near future.

3.2. Future of the HIV Epidemic in the Dominican Republic

The projections indicate, with some uncertainty, that the HIV epidemic will continue to spread in the next five years. Based on the data currently in hand, it is estimated that the total HIV population could increase by approximately 11,000, from 64,000 in 2005 to 75,000 in 2010 – in other words, 2,000 to 3,000 new cases a year during the five-year period (WHO-UNAIDS). UNAIDS and WHO will review their estimates and projections in 2007 using more up-to-date methodologies and instruments. These same projections indicate that in the Dominican Republic the epidemic will increasingly affect women more than men, as shown in Figure 4.



3.3. Characteristics of the National Health System Response to HIV

The Dominican Republic has accumulated long experience and developed impressive capability in the public sector and with nongovernmental and social grassroots organizations. As a whole, these entities constitute the National Health System (SNS) according to Law 42-01. Over the country's 25-plus years of experience, the milestones described below have been achieved.

At the end of the 1980s, following detection of the first case of AIDS in 1983, SESPAS established the National STDs and HIV/AIDS Control Program (PROCETS).

In 1986, as WHO was launching an international movement and the Global Program on AIDS had just formulated its first world strategy, the National Council on AIDS

(CONSAIDA) was established in the Dominican Republic under SESPAS leadership to support the national response to the epidemic. This coordinating body, which included representatives from a number of different sectors and nongovernmental organizations, prepared the first strategic plans with assistance from the PAHO/WHO Global Program on AIDS (GPA) and other bilateral and multilateral agencies, particularly USAID.

In its first 10 years of activity, PROCETS laid the foundation for epidemiological surveillance and introduced population-based prevention and health promotion interventions (giving priority at that time to the groups at highest risk – namely, sex workers and men who have sex with men), as well as measures to guarantee safe blood and provide comprehensive care for persons affected by the disease (defined as emotional support services, counseling, treatment of opportunistic infections, and palliative care, since ARV drugs were not available at the time).

PROCETS produced an important body of information and knowledge that has served as the basis for subsequent initiatives and has greatly helped to develop a critical mass of scientific investigators and social leaders who since then have been charting the development of responses to the epidemic in different areas and sectors. Several of the early projects that focused on populations at greatest risk were later taken over by nongovernmental organizations.

Against this background, the Law on AIDS (Law 55-93) was approved in 1993 (and is now being reviewed by the Congress of the Republic). At the same time, initiatives got under way leading up to formulation of the National Strategic Plan 2000-2003. In light of the shifting direction of the epidemic, PROCETS was turned into the Directorate General for the Control of Sexually Transmitted Infections and AIDS (DIGECITSS).

The Law on AIDS 55/93 makes it compulsory for institutions to provide comprehensive health care services for persons living with HIV based on their needs (the country's current definition of comprehensive care includes HAART). Article 18 instructs SESPAS to prepare a list of drugs and/or vaccines of proven effectiveness in the treatment of HIV infection for the purpose of exempting them from customs duties.

The National Strategic Plan for 2000–2003 (PEN 2000–2003)¹⁵ was divided into three Strategic Areas:

- Policies, decision-making, and social mobilization (including actions that involve the legal framework, social mobilization, and epidemiological surveillance);
- Prevention (laboratory and blood banks, information, education, and communication (IEC) to promote behavioral changes in groups at risk, promotion

¹⁵ Consejo Nacional del Sida (CONASIDA), Secretaría de Estado de Salud Pública y Asistencia Social (SESPAS), Programa de Control y Prevención de las Infecciones de Transmisión Sexual (ITS) y Sida (PROCETS). Plan Estratégico Nacional ITS/VIH/SIDA 2000-2003. Santo Domingo, 2000.

of condom use, control of STIs, and programs for the prevention of mother-to-child transmission; and

- Care for persons living with HIV (personnel training, development of pre- and post-test counseling, comprehensive care, drugs, and support networks and groups).

PEN 2000-2003 reflected the most important needs and possibilities of the time. Among its contributions were the inclusion of HAART for the first time as part of comprehensive care, including the prophylactic use of ARVs; the development of protocols for the prevention of mother-to-child transmission, the generalized implementation of voluntary testing in risk groups coupled with counseling, and promotion of the participation of nongovernmental sectors in the health system response.

During this period, two events had a major impact on the Health System's response to the epidemic:

- In 2001, creation of the Presidential Council on AIDS (Presidential Decree 32-01) promoted by international movements under the leadership of UNAIDS that were advocating "expanded responses" to the epidemic. According to its founding decree, the Council, while chaired by the Secretary of Public Health, is intersectoral in scope and includes the participation of representatives from civil society. It is responsible for setting policy and national strategies.
- Approval of a World Bank loan and a grant by the Global Fund, which, together with resources received from other bilateral and multilateral international cooperation institutions (including the Clinton Foundation), resulted in an unprecedented increase in the availability of financial resources for strengthening the National Health System's response to HIV.

The most recent period (2004-2006), which is the main subject of this evaluation, has brought the following changes in the National Health System's response:

- Reconceptualization and reformulation of the national strategies promoted by COPRESIDA got under way during the last four-months of 2004.^{16,17} This process has relied on a strategic planning approach to reformulating the conceptual framework and the intervention strategies for the prevention of HIV transmission.

The strategy calls for the definition of "population groups" as the focus of strategic partnerships for the development and implementation of prevention

¹⁶COPRESIDA. Construcción de la Respuesta Nacional y sus Formas de Participación Social. Santo Domingo 2004

¹⁷ Fiallo Billini, Alberto. Plan Estratégico Nacional para el Control y la Prevención del VIH/SIDA 2005-2015. Arreglos institucionales y organizacionales de las alianzas estratégicas por bases poblacionales. COPRESIDA. Santo Domingo, 2004.

measures, including major participation by nongovernmental organizations. The “population groups” are defined on the basis of two criteria: first, the different behavior patterns vis-à-vis the epidemic adopted by populations and residents of certain areas, and second, the needs of homogeneous groups of inhabitants based on their risks and the spaces they share in everyday life or in society.

For each population group, strategic partnerships have been forged with several different governmental and nongovernmental organizations in a spirit of co-management. Specific interventions are planned, and resources are allocated, based on the expected outcomes.

The population groups that have been defined so far are: persons living in *bateyes*, the gay community (including transgender individuals, homosexuals, and other MSM), groups defined according to the gender approach, young people, migrants, children and adolescents, persons with disabilities, and sex workers.

- COPRESIDA is promoting the concept of “citizen overseers,” which enlists the participation of citizens in helping to improve public management by getting them involved in monitoring public policies. Persons living with HIV or AIDS are encouraged to participate as key players in formulating and managing the program; in attending to the pressing needs of persons living with HIV, with emphasis on the National Comprehensive Care Program (PNAI); and in implementing the social audit called for under Law 55-93 to review fulfillment of national standards and public policies on HIV.¹⁸ This strategy has taken the form of briefing persons living with HIV on the details of specific projects being supported in their networks, and also the hiring of persons living with HIV as co-counselors and “citizen overseers.”
- DIGECITSS, based on its somewhat limited experience during the previous period and in response to demand from the community of persons living with HIV, embarked on a rapid expansion of comprehensive care units (CCUs) in hospitals and some of the primary health care and NGO centers.
- The project financed by the Global Fund (GFATM) in 2002 is intended to increase access to treatment for HIV/STIs. The following key players have been identified: SESPAS, the Dermatological Institute, the Armed Forces, the Bureau of Prisons, and two local commercial operations responsible for organizing treatment kits. A National Commission on HIV Drugs was established, and it has announced that persons living with HIV shall be beneficiaries of HAART if they present themselves for treatment at any SESPAS health service establishment.

¹⁸ COPRESIDA. Memoria Anual 2006.

- Treatment quality has been assured under the GFATM project by establishment of a selection and prequalification system that follows the Fund's own procurement standards. The SESPAS health facilities are responsible for product quality assurance during storage and distribution. Once purchased, the drugs and supplies are to be received at SESPAS warehouses for distribution to the various levels of the system.
- In recent weeks, a process has gotten under way to reorganize, review, and update the PEN for 2006-2015, to make sure that it incorporates these strategic redefinitions and takes into account the changes that could occur when funding in the form of loans or grants is reduced or comes to an end in the future. At the time of writing, this effort was in the initial stage of organizing what needs to be done. Sustainability is an important issue that has given rise to much thought and concern in several sectors. This exercise of reorganizing, updating, and reviewing the PEN for a new 10-year window has been stimulated and enriched by the broader work under way to prepare the 10-Year National Health Plan.

4. Main Findings of the Evaluation

4.1. Progress Achieved, Strengths, and Opportunities

As indicated in the previous section, the Dominican Republic has a long history of response to HIV, and these experiences have taken place within a political, legal and regulatory framework that has provided an important basis for guiding the actions of the Health System at all levels toward rapid progress in achieving the goal of universal access. The degree of political commitment is reflected in the priority assigned to strengthening the overall response of SESPAS to challenges as they arise, as well as to strengthening the various entities responsible for executing the national and health system response.

With substantial support from external financial resources, the country has taken steps to accelerate the expansion of various services, especially in the last two years. During this period there has also been a substantial increase in the participation of civil society in management of the national response, and at the same time, strategic partnerships have been forged between entities in civil society and sectors of the government for the purpose of ensuring a strong, effective response to the challenge of HIV.

This evaluation has identified the following achievements and strengths.

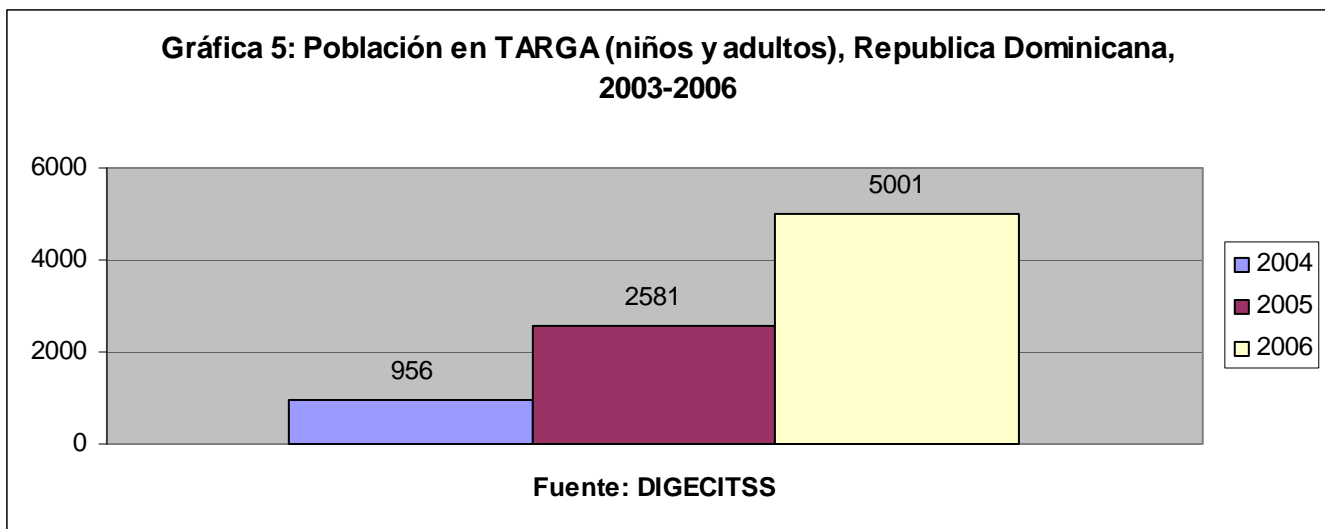
4.1.1. Rapid Expansion of Treatment Coverage

In the last three years the country achieved an unprecedented increase in HAART coverage for persons living with HIV who need it. HAART was introduced in 2003 at the time the first comprehensive care units (CCUs) were set up in third-level hospitals. These

units enroll infected individuals and provide them with care, including antiretroviral (ARV) therapy, depending on their treatment needs.

In 2004 there were a total of 14 centers; by 2006 there were 46 CCUs in place, providing coverage in most of the country's large cities, although they are not present in all the provinces. Naturally, the increase in the number of CCUs has resulted in a sizable increase in the number of persons captured by the system or being monitored, as well as in the number receiving HAART according to the established protocols.

Figure 5 shows that, as of December 2006, the CCUs were monitoring 14,050 people (adults and children), of whom 5,001 were receiving HAART. This means that between 2003 and 2006 the system's capture of persons living with HIV increased threefold and the number of persons with HIV receiving HAART almost doubled.



These efforts to increase the coverage of comprehensive care to persons living with HIV are relevant and serve a very obvious need, especially if it is considered that families that have at least one person with HIV devote up to 90% of their income on expenditures related to these needs¹⁹.

The rapid expansion of the number of people in HAART implied a substantial strengthening of human resources (duly trained for the delivery of services in accordance with the protocols) for the delivery of assigned services on a full-time basis. This represents a development of important infrastructure that can potentially be used by the health system to achieve a greater expansion of the services toward the prevention and treatment of HIV and STIs, as well as comprehensive health service in relation to the reform processes in progress.

¹⁹ Castellanos César. Instituto Nacional de la Salud (INSALUD). Informe final 1a. Fase de la Iniciativa SINERGIA. Santo Domingo, 2006.

At the same time, drug procurement and distribution processes were developed so that persons with HIV who were being monitored through the CCUs had ongoing access to drugs at reasonably competitive prices negotiated by the Clinton Foundation. In most cases these prices have been lower than the reference prices for the Region. During the evaluation, a supply of ARVs and drugs for opportunistic infections was found to be available in 9% of the field visits to 18 hospitals, 12 of which have CCUs.

It is important to point out that accelerated access to treatment coverage through the CCUs occurs with quality services, provided with empathy, as reflected in the level of satisfaction expressed by the CCU users during the course of the field visits. This experience of high-quality, compassionate care is an important referent for the strengthening of HIV care in the rest of the health services network.

4.1.2. Establishment of the National Program for the Reduction of Vertical Transmission

In the four years since the implementation of the National Program for the Reduction of Vertical Transmission (PNRTV) in 2002, the number of health facilities meeting the requirements to carry out the program in the country as a whole increased from 22 to 122. These facilities have appropriately trained human resources and the necessary supplies, including management guides and protocols, for integrating PNRTV interventions into health care services for women during pregnancy, delivery, and the puerperium. At the same time, the number of health care facilities with units that report data to the PNRTV increased from 74 in 2004 to 84 in 2005 and 111 in 2006.

As a result of this rapid increase, access to HIV counseling and screening tests has improved significantly. HIV test coverage increased from 23% in 2002 to 35% in 2005 and 39% in 2006. Post-test counseling coverage increased from 12% in 2004 to 23% in 2005 and 2006. Among the pregnant women who were detected by the services, the increase was 29.6% in 2004 and 40.6% in 2006.

4.1.3. Infrastructure, Human Resources, and Regulation

The country has highly skilled human resources for programming and managing the health response. Moreover, infrastructure has been developed and human resources have been assigned to comprehensive HIV care and the prevention of mother-to-child transmission. Furthermore, protocols and care standards have been developed, and personnel have received extensive training in monitoring these standards in the comprehensive care units and PNRTV services.

4.1.4. Mobilization of Financial Resources

The Dominican Republic has succeeded in mobilizing unprecedented external resources. During the period in question, activities were initiated under a World Bank loan for US\$25 million and a Global Fund grant in the amount of US\$48.5 million, both of them executed by COPRESIDA under the supervision of the public sector. In addition,

financial resources and technical cooperation were received from bilateral and multilateral cooperation agencies represented in the country – specifically, the UNAIDS Secretariat, the cosponsoring agencies (UNICEF, PAHO/WHO, and UNFPA), and USAID.

4.1.5. Political Will to Strengthen the Health System Response to HIV

This evaluation is taking place in the midst of a very dynamic process within the agencies and organizations attempting to strengthen the health system response in general as well as its capacity to respond to HIV and other STIs in particular.

The SESPAS decision to conduct an external evaluation of the Health System's response is perhaps the most significant indication of this political will.

Since the collection of data in December 2006, DIGECITSS, the Undersecretariat of Public Health, and the Undersecretariat of Individual Care have taken a number of steps, including the following:

- A review, in January 2007, of the strategies and activities programmed under the DIGECITSS Annual Operating Plan 2007, including workshops in each region of the country with teams from the Regional and Provincial Health Directorates, with a view to developing strategic plans that incorporate primary care units, rural clinics in the PNRTV network, and comprehensive HIV care;
- Coordination meetings with the Undersecretariat of Public Health and the Undersecretariat of Individual Care, which have made the commitment to support the regional workshops;
- Coordination meetings with social security to ensure that access to PNRTV is included in the basic social security package.

These measures are consistent with the health sector reform process, especially with regard to the recent directives on the separation of leadership and service delivery functions: the leadership role corresponds to the Provincial Health Directorates (DPSs) and the Undersecretariat of Public Health, while the delivery of services is the responsibility of the Regional Health Directorates (DRSs) and the Undersecretariat of Individual Care.

It is expected that involving the DRSs and DPSs in the process of decentralized strategic planning will help to advance the integration of comprehensive HIV health care services (prevention, care, and treatment) into all the services in the network, depending on their response capacity, with efficient and well-established mechanisms for referral and counter-referral.

4.1.6. Consolidated Epidemiological Surveillance and Information Systems for Monitoring Patients in all Comprehensive Care Units

The country has a well-developed epidemiological surveillance system that has included compulsory notification of AIDS cases for over 10 years, as well as sentinel surveillance of HIV infection. A second-generation surveillance strategy was adopted in 2002, and since then efforts have been being made to improve the quality of information through the strengthening and expansion of sentinel posts, behavior surveys conducted among specific population groups, and the demographic and health survey coupled with HIV serology screening in 2002. Another national demographic and health survey with HIV serology screening is planned for 2007. DIGECITSS has set up a patient monitoring system that is being used in most of the CCUs, as well as a rather extensive system for monitoring mother-to-child transmission.

In the context of the present evaluation, the information from these systems has been invaluable for analyzing gaps at the national level, and it is also being used for the same purpose at the regional and provincial levels. This will be important input for the establishment of goals to reduce gaps at the regional and provincial levels, and for formal commitments by the DRSs and DPSs to meet mutually agreed upon goals. These steps represent major progress in the analysis and utilization of available information for planning, monitoring, and evaluating the health system response to HIV/STI.

4.2. Analysis of Gaps in Coverage and Financing

To guide the decision-making process, it is essential to carry out an ongoing analysis of progress toward meeting the country's goals. In this evaluation, the concept of gap analysis is introduced through the identification of trace indicators that make it possible to assess what remains to be done in order to achieve the goal of universal access – in other words: How much effectiveness was lost in the utilization of resources? What were the missed opportunities?

It is important to point out that different sources of information have been used for these estimates and that, consequently, the absolute numbers and proportions of the gaps will vary depending on the choice of numerators and denominators. Nevertheless, despite possible discrepancies resulting from the selection of different information sources, one of the intentions of this report is to present a methodology that will makes it possible to analyze the impact of how health investment is being managed, the breakdown of this investment, and the extent to which, with existing resources and interventions, the Health System is moving sustainably toward the goal of universal access. Annex 2 summarizes the information used and the assumptions made in the gap analysis presented in this section.

Despite rapid expansion in the availability of services during 2005 and 2006, there continue to be major coverage gaps that pose challenges for the National Health System.

4.2.1. Gap in the Capture of Persons Living with HIV

One of the country’s goals for 2006-2010 is to have 100% of its population with HIV either being monitored or receiving ARV therapy in the CCUs and being followed clinically. In order to achieve this goal, it is indispensable to capture the persons living with HIV both early and effectively. As seen in Figure 6, the estimated population that should have been under monitoring but had not been captured by the services in 2006 came to a total of 51,950 – in other words, only 21% of this population is being captured. Even though the number of patients entering the CCUs nearly tripled during the period, the gap was only closed by 15%.

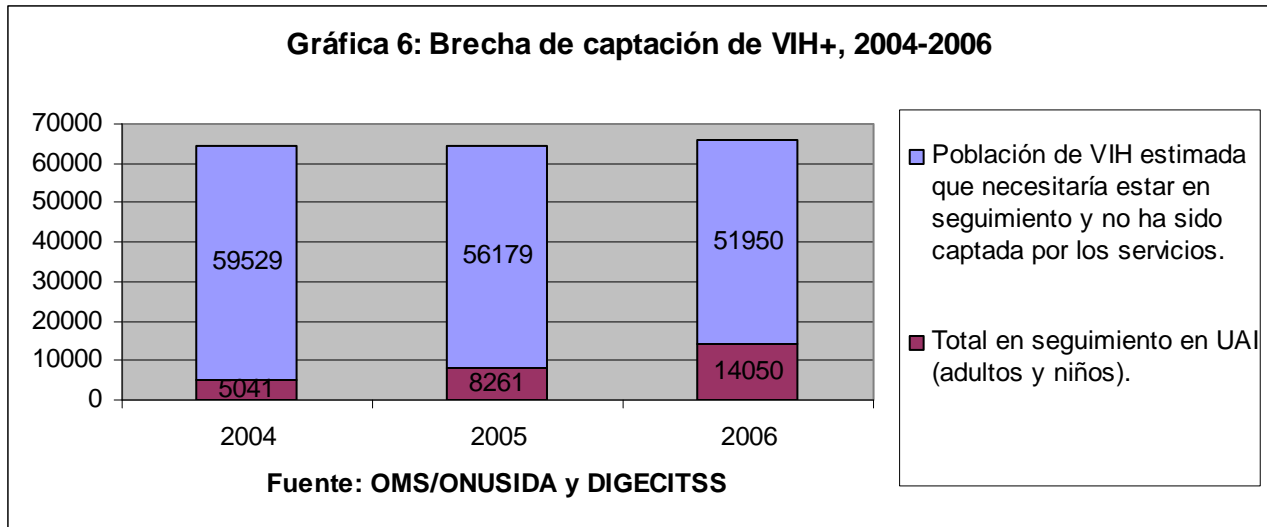
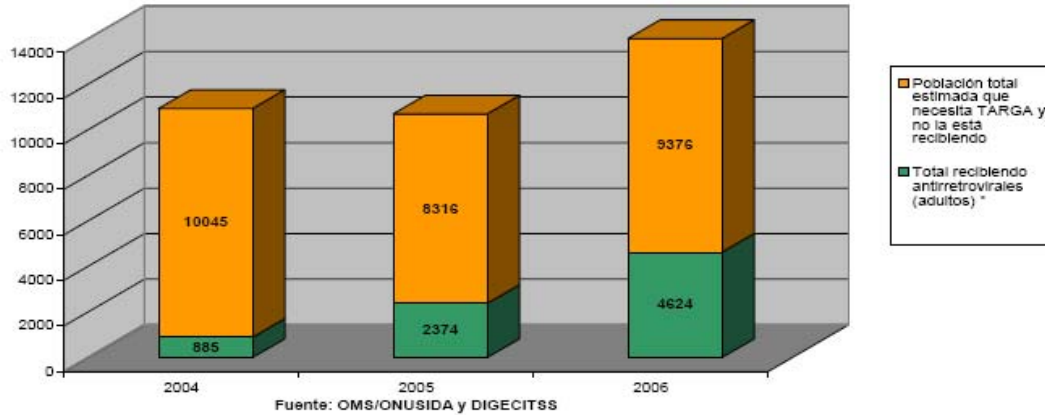


Figure 7 shows that, as of 31 December 2006, only 33% of the estimated total number of persons needing HAART were in treatment. While the number of adults with HIV receiving HAART almost doubled between 2005 and 2006, the number of adults needing treatment increased as well, from 10,690 in 2005 to 14,000 in 2006.²⁰ It is important to note that in that same year there were an estimated 6,100 deaths in adults with HIV, many of which could have been prevented if the Health System had captured these people on a timely basis and given them access to HAART.

²⁰ Midpoint of more recent estimates by WHO/UNAIDS.

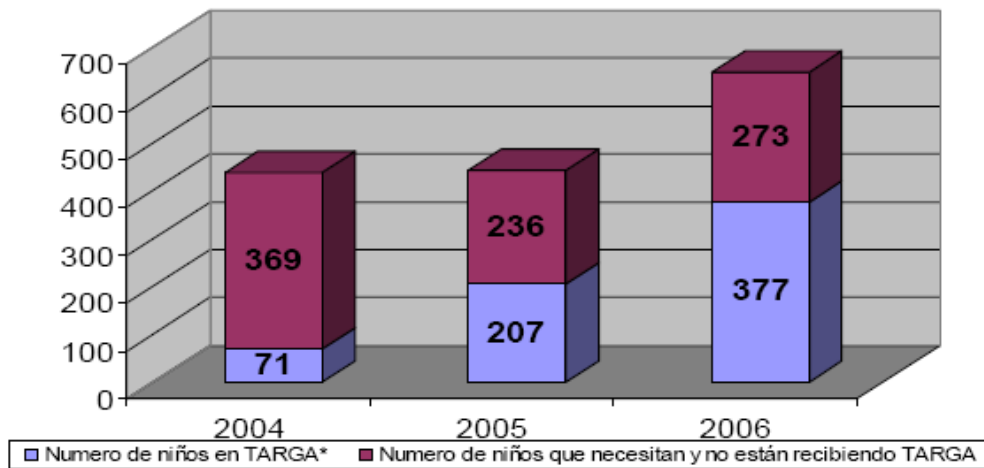
Gráfica 7: Brechas de TARGA en población adulta



The gaps in population failing to receive HAART are much smaller for children under 15 than for the adult population. As seen in Figure 8, coverage of children with HIV believed to be in need of HAART was almost 60% in 2006.

However, according to the analysis of PNRTV gaps, in that same year the lack of effective access to services for the prevention of vertical transmission caused between 800 and 2,100 children to become infected – children who will ultimately need HAART. Unless the prevention of mother-to-child transmission is expanded effectively, the gap in children under 14 years will continue to increase. Also, in 2006 there were an estimated 433 deaths in this population, many of which could be avoided with early capture and HAART.

Gráfica 8: Brecha de TARGA en menores de 15 años



4.2.2. Gaps in Mother-Child Coverage

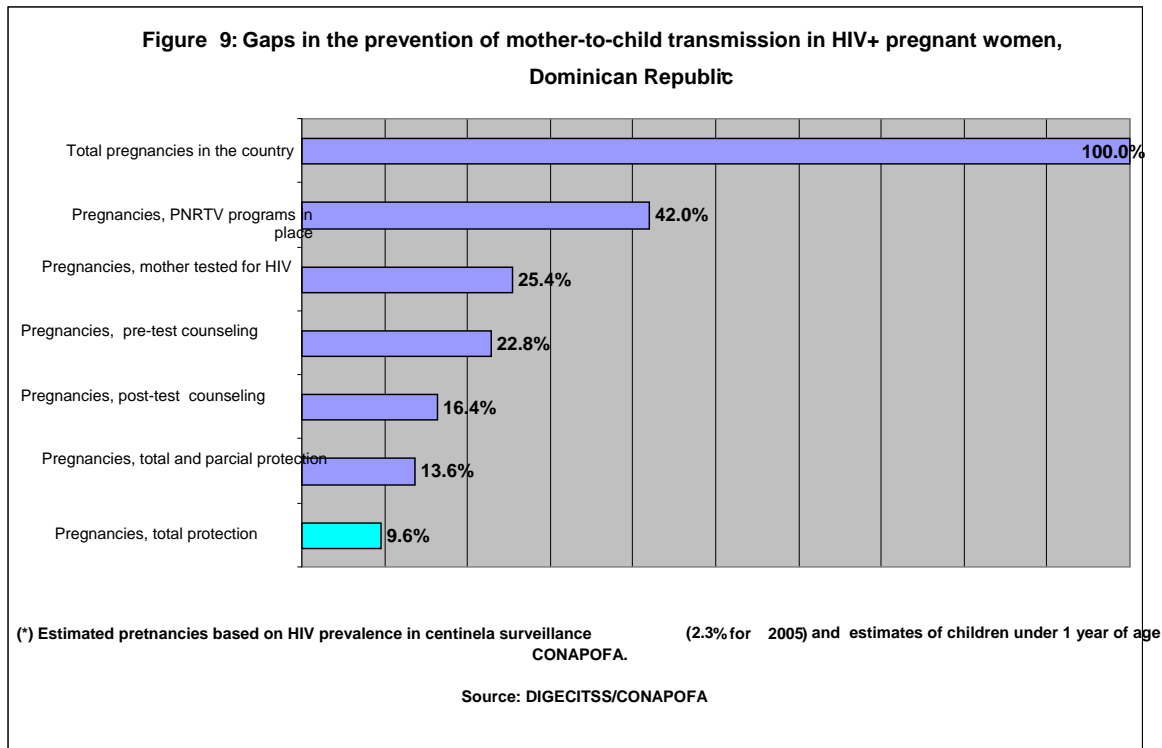
The goal of the “zero tolerance” initiative, launched by SESPAS in 2005, is to achieve zero cases of avoidable mother-to-child HIV transmission. As can be seen in Table 2, it is estimated that between 2,040 and 5,101 infections were found in infants between 2004 and 2006. These infections are considered avoidable because they are basically traceable to missed opportunities during the delivery of services in the health facilities.

Between 2005 and October 2006, only about 9% of the pregnant women with HIV (9.5% in 2005 and 8.8% in 2006) were captured by the health services and received complete protection according to the established protocol. This protocol can be applied effectively in a single contact with a pregnant woman with HIV at the time of delivery. Since institutional delivery in the country is estimated to be higher than 95%, and since there are financial, technical, and human resources available to implement this intervention efficiently, the PNRTV gap becomes the most important trace indicator that the Dominican health system needs to address in order to respond effectively to the HIV epidemic. This situation stands to benefit from the calls for overall strengthening of the existing health services and for improved quality of care during pregnancy, childbirth, and the puerperium.

Table 2. Estimated number of children with HIV because of missed opportunities for early capture. 2004-2006 (best and worst scenario)				
	2004	2005	2006 ⁽³⁾	Total
Estimated gap in complete protection of pregnant women	3,000	4,581	4,681	12,262
Estimated number of children with HIV because of missed opportunities for capture and intervention by the services – best scenario ⁽¹⁾	482	755	803	2,040
Estimated number of children with HIV because of missed opportunities for capture and intervention by the services – worst scenario ⁽²⁾	1,205	1,889	2,007	5,101
<p>⁽¹⁾ Best scenario: 15% transmission during pregnancy and childbirth; 5% transmission through breast-feeding = 20% transmission.</p> <p>⁽²⁾ Worst scenario: 30% transmission during pregnancy and childbirth; and 20% transmission through breast-feeding = 50% transmission.</p> <p>⁽³⁾ Estimate as of October 2006</p> <p>Note: Without treatment, 15% to 30% of the children born to mothers with HIV will be infected during pregnancy and childbirth. In addition, 5% to 20% will be infected during breast-feeding.</p> <p>Source: PAHO/WHO</p>				

An analysis of the data available points out major deficiencies both in the access pregnant women have to HIV screening tests and in the assurance that all pregnant women who visit the health services receive the benefits of the program for effectively reducing mother-to-child HIV transmission.

Due to a cascade of opportunities missed by the Health System, the resulting net effect is that only one in every 10 pregnant women with HIV has access to the measures offered by the Health System to reduce mother-to-child HIV transmission in pregnant women who are already HIV-infected. This sequence of missed opportunities is shown Figure 9.



The missed opportunities between 2004 and 2006 have a lot to do with the Health System’s organization, its response capacity, and its fulfillment of basic public health functions at the different levels of care in the health services network.

The proportion of children born to mothers identified as HIV-positive who did not receive any intervention to reduce mother-to-child transmission (neither nevirapine nor breast milk substitutes) declined from about 50% in 2004 to between 35% and 40% in 2006 (Annex 2).

The gap in terms of missed opportunities to capture children of mothers with HIV continues to be unacceptably high, considering that these mothers were found to be HIV-positive during pregnancy.

Analysis of the care gaps made it possible to identify the critical points at which the Health System failed to capture the target population. The results show that less care is currently being provided than is needed, and consequently there will be more cases in the future that could have been avoided. These are called preventable cases, and caring for them will require additional resources. In the evaluation, an attempt has been made to measure the financial impact of the gap in maternal and child care. The following section offers an estimate of the cost imposed by the gap in PNRTV care.

4.2.3. Costs of Caring for Preventable Cases of Mother-to-Child Transmission

The scientific literature has already documented the validity of the adage “an ounce of prevention is worth a pound of cure” when it comes to management of the HIV epidemic. Studies demonstrating the cost-effectiveness of successful interventions to prevent transmission are based on a comparison of the estimated cost of implementing prevention measures versus their anticipated effectiveness. If the number of cases potentially avoided as a result of an intervention is chosen as measure of its effectiveness, then the cost-effectiveness ratio is a measure of the cost of avoiding the cases.

In practice, when an intervention is performed under conditions that keep it from being maximally effective in terms of preventable cases (based on the known effectiveness of the intervention), society, in addition to assuming the cost of added suffering due to greater disease, is obliged to allocate resources to provide health care for the people who present these cases that could have been prevented. The estimated resources needed to adequately care for these people are referred to in this report as “costs of caring for preventable cases” (one might even add “that are not prevented”).

In this evaluation, this exercise was undertaken only with reference to the PNRTV – an intervention in which the effectiveness of each of its components has been documented with certainty.

For 2006, an analysis of the gap (Table 2 and Annex 2) shows the following numbers with respect to pregnant women with HIV:

- Not captured by the services: 4,014
- Captured but not provided with any protection: 47
- Range of preventable cases in newborns: 803–2,007

The cost of providing complete coverage for the woman and her child has three components:

- Diagnosis;
- Completion of the treatment protocol for pregnant women diagnosed as HIV-positive: delivery by cesarean section and a single dose of nevirapine (NVP) –200 mg for the mother during delivery, plus 2 mg/kg for the newborn; and
- Substitution of breast milk during the first six months of the child’s life.

A total of 191,344 pregnant women came to the health services in 2006 for their first consultation, and of this number, 112,109 did not undergo any diagnostic test. Considering that institutional delivery coverage in the Dominican Republic is close to 100%, it is reasonable to assume that the system failed to identify the HIV-positive women.

The cost associated with timely identification of HIV-positive pregnant women is considered to be equivalent to the cost of properly examining all pregnant women. In 2006, as a result of failure to follow the maternal treatment protocol, the system failed to identify 58% of the target population and a total of US\$161,537 was “saved.” As a result of failure to administer the diagnostic test, the opportunity to identify 4,014 HIV-positive pregnant women was missed, and thus, the opportunity to provide them with regular prenatal care and to take the measures prescribed under the PNRTV zero tolerance protocol was missed. Analysis of the gaps would indicate that during 2006 the number of cases in children that could have been, but were not, prevented as a result of these lapses ranges between and 803 and 2,007.

Table 3 shows a summary of the Health System’s resources “saved” because of noncompliance with the current maternal treatment protocol, which includes the zero tolerance PNRTV strategy.

Table 3. Cost savings from incomplete PNRTV coverage, 2004-2006 ⁽¹⁾						
Action	Number of persons and actions per year			Total	Unit cost (US\$)	Total cost (US\$)
	2004	2005	2006			
I. Pregnant women not captured	2,409	3,777	4,014	10,200	NA	7,064,568.86
HIV tests	167,383	145,200	112,109	424,692	1.44 ⁽²⁾	611,556.00
Cost difference for cesarean section	2,409	3,777	4,014	10,200	18.32 ⁽³⁾	186.86
NVP for the woman	2,409	3,777	4,014	10,200	0.08	816.00
NVP for the child	2,409	3,777	4,014	10,200	0.09	918.00
Breast milk replacement	2,409	3,777	4,014	10,200	632.46 ⁽⁴⁾	6,451,092.00
II. Captured pregnant women	839	1,288	1,123	3,250	NA	13,738.72
No protection provided	18	86	47	151	18.49	2,791.99
No cesarean section provided	216	193	188	597	18.32	10,937.04
No NVP provided for the woman	22	11	24	57	0.08	4.56
No NVP for the child	22	11	24	57	0.09	5.13
Total “savings” (I+II)	NA	NA	NA	NA		7,078,307.58

NA=Not applicable.
 (1) Value at 2006 purchase prices.
 (2) Includes cost of administering the DoubleCheck Gold screening test to 100% of the women and the confirmation test (Acutel) to 3% of the women.
 (3) Although the SENASA fee is the same for both cesarean section and normal delivery, this value is used as proxy to represent the difference in cost; it corresponds to the difference between the rate that SENASA pays for a delivery to a private provider (at the low end of the range) and a public provider.
 (4) Consumption of 48 cans of milk over 6 months at RD\$436 per can.
 Source: PAHO/WHO

If the idea were to justify delivering sufficient care to meet the zero tolerance goal, strictly from a financial standpoint, it would be necessary to compare the “cost of preventing” versus the “cost of treating” (to date there is no known cure for HIV). The summary figures for this comparison are shown in Table 4, based on the following method of estimation.

The cost of prevention is considered to be the cost of the resources that the Health System would have needed in order to properly apply the established zero tolerance PNRTV protocol to all pregnant women. Table 3 shows that it would have cost approximately US\$ 7 million to prevent mother-to-child transmission in pregnant women not covered during the period 2004-2006. The money not spent because of these missed opportunities has been identified as “savings.”

The “savings” are then compared to the additional financial cost that the system would have to bear as a consequence of this practice. The figures presented here are actually underestimated, since consideration has only been given to the cost the system would

have to bear in order to provide HAART for the HIV-positive children during their expected lifespan and no allowance has been made for the cost of all the physical and mental health care that the Health System would ultimately have to bear.

A socioeconomic evaluation would also include other costs outside the Health System for which society assumes the burden. These variables would include the value of the additional time that adults responsible for the care of these children would have to devote if the children are HIV-positive, the transportation costs associated with getting treatment, and the difference in the cost of food. On top of all this, there is the immeasurable component of suffering that could be avoided both for the HIV-positive child and other persons affected.

The scientific data based on clinical practice and assuming uninterrupted access and adherence to HAART show that it is possible to expect these children to live an average lifespan of 18 years.²¹ Table 5 shows the cost of HAART for the 2004-2006 cohort. Minimum and maximum values are shown, depending on the range of preventable cases indicated in Table 2.

	Best-case scenario	Worst-case scenario
Cost of preventing	7,078,307	7,078,307
Cost of HAART	20,636,640	51,601,716
Net loss for the Health System	13,558,333	44,523,409
Source: PAHO/WHO		

Range	Preventable cases				ARV cost/case ⁽¹⁾	Annual cost	Cost in 18 years ⁽²⁾
	2004	2005	2006	Total			
Minimum	482	755	803	2,040	562	1,146,480	20,636,640
Maximum	1,205	1,889	2,007	5,101	562	2,866,762	51,601,716
(1) 80/20 breakdown of first- and second-line treatment; first line cost per child US\$278; second line cost per child, US\$1,707. (2) These figures reflect the financial burden that the Health System would have to bear. Source: PAHO/WHO							

If the Health System were to effectively provide the required care for these children, the financial burden for HAART alone would be between US\$13.5 million and US\$44.5 million. Thus, in the worst-case scenario of virus transmission, the country will need the

²¹ Hill D.W, Sullivan, Olson C, Ruiz J, Maldonado YA. International Conference AIDS 2002 July 7-12 Abstract TuPeC4771. Population-based Survival in Perinatal HIV Infection before and after PACTG076

equivalent of at least two loans from the World Bank just to take care of cases of infection occurring in the last three years, most of which could have been prevented.

The foregoing calculations are both revealing and alarming since these cases of pediatric HIV, in addition to reflecting missed opportunities, are occurring in a time when the Health System – with supervision by the public authority – has been enjoying a substantial flow of financial resources. Scientific progress has made it possible to have highly effective low-cost technical solutions to reduce mother-to-child transmission of the virus to minimal levels. In some countries this approach may not be viable because low rates of institutional delivery make it impossible, first, to capture HIV-positive pregnant women and, second, to provide the drugs and offer delivery by cesarean section; yet, this is not the case in the Dominican Republic.

The present evaluation has confirmed findings already documented elsewhere – for example, *it has been said that the poor quality of health services in the Dominican Republic is due not so much to lack of human resources or infrastructure but rather mainly to management problems and institutional attitudes, which result in inefficient spending, scarcity of current financing, and serious ethical problems due to lack of regulation and the complex structure of Dominican society. For example, maternal mortality in the Dominican Republic is more than triple what it should be by international standards, given the fact that 98% of deliveries are attended by health personnel.*²²

The Dominican Republic urgently needs to take a close look at spending, going behind the line items reported to funding agencies, and introduce changes that will make it possible to substantially improve the quality of spending – in other words, invest resources in ways that ensure they will really yield the maximum returns that can be expected.

In particular, the evaluation team suggests that SESPAS and COPRESIDA review the types of activities that have been financed under the headings of “workshops” and “training.” Meetings with staff during the analysis phase and field visits during the evaluation highlighted the need to re-train personnel involved in maternal care. It is urgent to improve the acceptance of persons living with HIV in institutions that provide care. Meetings with focus groups revealed that in some cases a staff member attending a delivery had made the decision not to apply the protocol.

Financial resources could be redirected so that they would have greater impact. For example, in the expenditure executed by COPRESIDA there has been very little activity under “training” within the overall heading of “education.” In the years under review, the total reported expenditure on education was US\$5,536,456, broken down into courses, seminars, workshops, and training. Upgrading of health personnel comes under the

²² UNDP. Informe Nacional de Desarrollo Humano 2005: Hacia una Inserción Mundial Incluyente y Renovada

heading of training, where only 5.7% of the total budget for education has been spent. It is therefore recommended that resources be reassigned for the effective training of health personnel, including not only the technical aspects but also education about the commitment that has been made to address the HIV challenge and provide care for persons who have the infection.

4.2.4. Gap in Funding for Universal Access

Since improvements in the Health System's response capacity in recent years have been possible mainly thanks to external financing, it is legitimate to ask whether the system is viable enough to maintain these achievements and move toward reducing and eventually closing the gaps in coverage that have been observed.

Although the country has developed global estimates of the cost to achieve the Millennium Goals,²³ this evaluation has focused on estimating the level of financial resources needed to close the coverage gaps based on specific health system performance data. One way of measuring the system's level of efficiency is to observe the level and trend of the cost-effectiveness ratio over the evaluation period. For this purpose, "cost" was considered to be all resources used under public supervision, and "effectiveness" was the number of persons living with HIV, including pregnant women, captured by the services.²⁴

Estimate I

The evaluation presents two estimates of the cost to close the gap. Estimate I assumes that the expenditure per person captured remains unchanged. Estimate II assumes that the percentage increase in expenditure per person captured in 2006 is repeated in 2007.

Estimates were calculated for 2004, 2005, and 2006 (Figure 10 and Table 6). Following is an explanation of how the figures were derived. Given the fact that the infrastructure was going through adjustments during these years and investments were being made in equipment, the estimated cost-effectiveness ratio was calculated on the basis of current expenditure per person captured by the services. It was estimated that every year 20% of spending went for investment, and therefore current spending was equivalent to 80% of total expenditure for the year in question. The number of persons being monitored was considered to be the total number of persons living with HIV who were being monitored plus the number of pregnant women with HIV who had received some form of care during the year. According to these criteria, current spending per person on monitoring was US\$605 in 2004 and US\$986 in 2006.

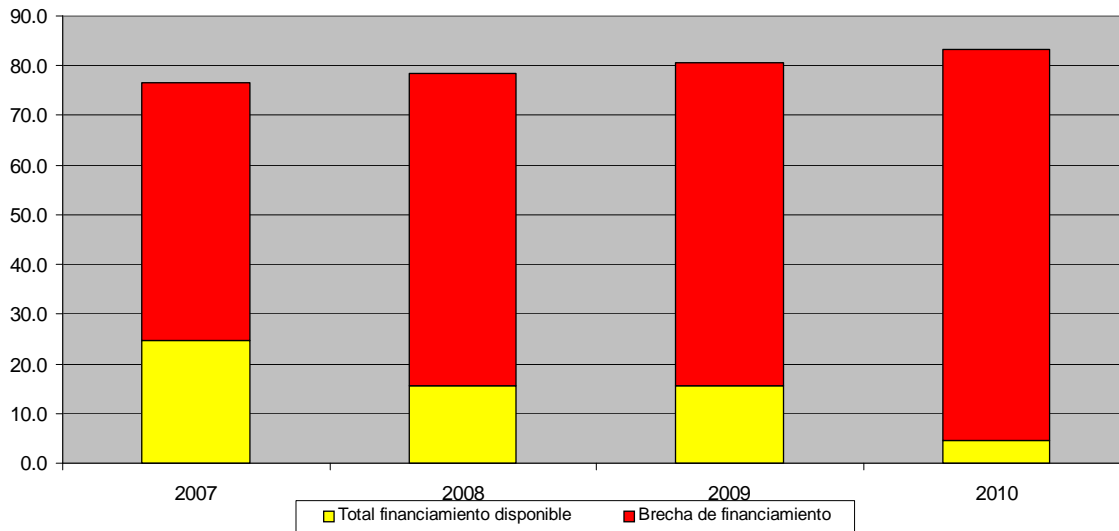
²³ United Nations and ONAPLAN. Investing in the Sustainable Development of the Dominican Republic: Millennium Development Goals (MDGs) Needs Assessment. Santo Domingo, July 2005.

²⁴ This measurement tends to underestimate the system's efficiency, because it does not include financial resources that do not go through COPRESIDA or DIGECITSS but which nevertheless contribute to capturing persons with HIV. It is therefore recognized that the numerator is underestimated.

The next step, using current expenditure per person observed in 2006, was to estimate the cost of providing coverage for the period 2007-2010 to 100% of the expected number of persons with HIV and pregnant women with HIV based on UNAIDS estimates. The “drag” cost of caring for cases in children that could have been prevented in 2004-2006 was added to this figure. It was assumed that no additional pediatric cases would occur (in other words, that PNRTV will be applied according to the established protocol 100% of the time). It should be pointed out that using expenditure/person in 2006 as a constant in subsequent years implies that the level of efficiency, in terms of both response and management of patient care, will remain unchanged.

The financing available for 2007-2010 will include resources from the Global Fund grant until 2009 and from the World Bank loan until 2007, plus the Government’s allocations to DIGECITSS and COPRESIDA. For purposes of this estimate, it was assumed that these amounts would be the same as for 2006.

Gráfica 10: Estimación I - brecha financiera para 100% cobertura, República Dominicana, 2007-2010 (US\$M) ⁽¹⁾



(1) Asumiendo que el gasto por persona captada se mantiene constante

Fuente: OPS/OMS

Table 6. Estimate I: Gap in funding needed to achieve 100% coverage, Dominican Republic 2007-2010 (number of persons and US\$) ⁽¹⁾				
	2007	2008	2009	2010
(a) Total number of persons living with HIV, including pregnant women	77,787	79,617	81,707	84,517
(b) Cost of 100% capture	76,698,817	78,503,217	80,563,979	83,334,669
(c) Resources available	24,688,029	15,688,029	15,688,029	4,454,696
<i>Global Fund</i>	<i>11,233,333</i>	<i>11,233,333</i>	<i>11,233,333</i>	<i>0</i>
<i>World Bank</i>	<i>9,000,000</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>Government allocation</i>	<i>4,454,696</i>	<i>4,454,696</i>	<i>4,454,696</i>	<i>4,454,696</i>
(b)-(c) = Funding gap	52,010,788	62,815,188	64,875,950	78,879,973
⁽¹⁾ Assuming that the expenditure per person captured remains unchanged. Source: PAHO/WHO				

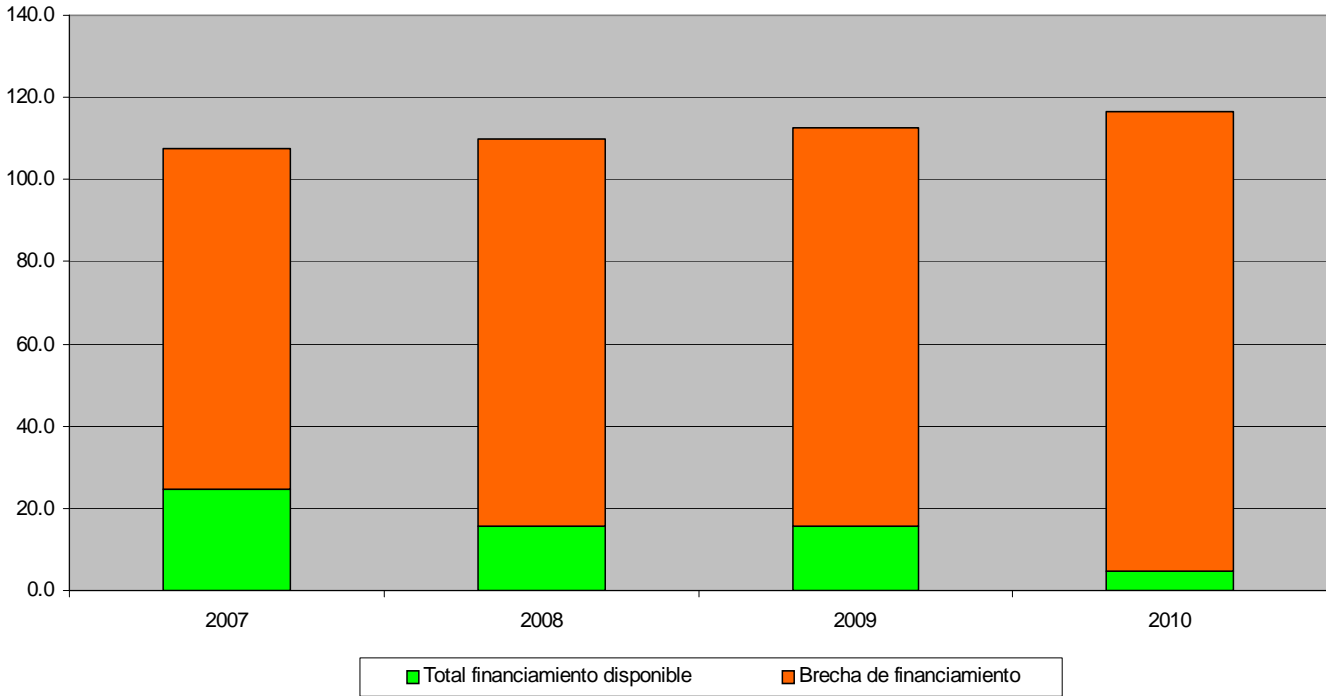
Although these figures are rough estimates, they do give an idea of the financial challenges that lie ahead for the response capacity of the Dominican Health System if two problems are not addressed – namely: the inefficiency with which available resources are being used, and the need to identify sources of financing beyond the Global Fund and the World Bank.

The inefficiency of spending and its long-term consequences have been illustrated in the first part of this section by estimating the financial burden that could have been avoided if the established protocol for the PNRTV zero tolerance policy had been applied. Section 9.5, Financing and Expenditure, refers to the effectiveness with which resources have been used. For example, a lot of resources were spent on activities which, although they may have helped to meet the process indicators established in the agreements with the financing agencies, diverted attention away from the urgent need to take actions that would have a clear impact on controlling the epidemic.

Estimate II

A close look at the trend in expenditure per person captured shows that the figure is increasing at a rapid rate, with a jump of 40% between 2005 and 2006. If this pace continues, there is no doubt that the funding gap will become even more unmanageable. To illustrate this point, a second estimate was done to calculate the cost of achieving universal coverage if the current expenditure per person captured saw yet another 40% increase in 2007. This situation is presented in Figure 11 as well as in the estimated data shown in Table 7.

Gráfica 11
Estimación II: brecha de financiamiento para 100% de cobertura (U\$S), República Dominicana, 2007-2010⁽²⁾



⁽²⁾ Asumiendo que en 2007 el gasto por persona captada crece a la misma tasa que en 2006 y se mantiene constante para los años siguientes
 Fuente: OPS/OMS

Table 7. Estimate II: Gap in funding needed to achieve 100% coverage, Dominican Republic 2007-2010 (number of persons and US\$)⁽²⁾

	2007	2008	2009	2010
(a) Total number of persons living with HIV, including pregnant women	77,787	79,617	81,707	84,517
(b) Cost of 100% capture	107,378,344	109,904,504	112,789,571	116,668,537
(c) Resources available	24,688,029	15,688,029	15,688,029	4,454,696
<i>Global Fund</i>	11,233,333	11,233,333	11,233,333	0
<i>World Bank</i>	9,000,000	0	0	0
<i>Government allocation</i>	4,454,696	4,454,696	4,454,696	4,454,696
(b)-(c) = Funding gap	82,690,315	94,216,475	97,101,542	112,213,841

⁽²⁾ Assuming that the 2007 expenditure per person captured increases at the same rate as it did in 2006 and remains unchanged in subsequent years.
 Source: PAHO/WHO

These figures are not only eloquent, they are consistent with the analysis presented in Section 9.3 of the system's leadership, organizational, and managerial characteristics, which directly undermine its ability to effectively allocate resources and therefore its ability to provide a quality response to the growing problem of HIV.

With regard to the urgency of finding resources to make up for the imminent departure of the World Bank and the upcoming departure of the GFATM and, in general, to the intensive search for external funding alternatives, it is indispensable to review policies on health insurance coverage. Specifically, it is important to review the regulations governing the Family Health Insurance (SFS) because, as pointed out in Section 7.4, COPRESIDA and DIGECITSS are responsible for HIV treatment.

4.3. Analysis of Health System Functions and Factors that Limit Policy Implementation

4.3.1. Leadership, Administration and Management of the Health System Response to the HIV Epidemic

The steering function plays an essential role in guaranteeing the consistency and direction of policies, strategies, and interventions, and also ensuring that the public interest prevails. These assurances translate into the capacity to define national policies and strategies based on consensus of the different stakeholders (public, private, and nongovernmental) in the National Health System. They also make it possible to establish efficient mechanisms for the management and allocation of resources, which in turn ensure adequate implementation of national policy based on criteria of social, geographical, and gender equity.

According to legislation currently in effect, including the updated draft of PLANDES 06-15, SESPAS is responsible for the leadership, administration, and management of health at the national level, working through its various central and provincial entities. At the central level, SESPAS includes the Office of the Secretary, the Undersecretariat of Public Health, the Undersecretariat of Individual Care, and other undersecretariats, including the Health System's main regulatory authorities. At the provincial level, the steering role is performed by the Provincial Health Directorates, which answer directly to the Office of the Secretary of Public Health.

Within this legal framework, SESPAS has central agencies that perform predominantly regulatory roles, including the development of national standards and protocols, supervision, monitoring and control, training, research, and resource mobilization. The SESPAS normative agency that deals with HIV at the central level is the Directorate General for the Control of STI/AIDS (DIGECITSS). Other related national normative agencies include the national technical offices concerned with maternal and child care, laboratories, blood banks, and drugs, as well as the Directorate General of Epidemiology, and Directorate General of Health Promotion and Education (DIGPRES).

In addition to its leading role in the health system response, since December 2006 SESPAS, as the entity that oversees COPRESIDA, has the ultimate responsibility of coordinating the national response to HIV. COPRESIDA, according to the decree that established it in 2001, comes under the Secretary of Public Health and is responsible for intersectoral coordination and the definition of policies, strategies, and national plans to address the HIV problem.

SESPAS also presides over the Global Fund's Country Coordinating Mechanism (CCM) for the HIV project. Even though the CCM is an ad hoc body and not part of the Health System's permanent structure, it is a Global Fund requirement for the coordination and execution of that organization's grants in the Dominican Republic, and its functions overlap the country's legally established health system organization.

At the time of this evaluation, SESPAS was undergoing a process of adjusting its organizational structure in light of the new functions defined in the law on health sector reform.

In this context, SESPAS continues to be responsible for overseeing the delivery of public health services through the General Preventive Programs provided for under the new legislation, which will continue to be financed by the Central Government – rather than through per capita contributions from the Family Health Insurance program (SFS) – as it gradually steps back from service delivery once the Regional Health Services (SRSs) are organized and able to join the network of establishments, provide the necessary levels of care, and guarantee comprehensive and continuous care for individuals while at the same time addressing the risks to their health. Funding will come from per capita contributions paid by social security through management contracts signed with public providers and National Health Insurance (SENASA).

The Provincial Health Directorates (DPS), which have mixed status because they not only function in a steering role under the central level but also participate in the administration of health services, become deconcentrated entities functioning on behalf of the health sector at the local level.

The DPSs are responsible for the certification of establishments; evaluation of service quality, access, and performance of health care providers (public and private); surveillance of local insurance coverage; and harmonization of service delivery. Their job is to ensure that all these processes are carried out in keeping with principles of equity, integrated service delivery, and universal access.

Law 87-01 calls for decentralizing the delivery of services throughout the health regions, which are considered geographical spaces within which it should be possible to achieve economies of scale in the management and delivery of care under the Basic Health Plan provided through Family Health Insurance (SFS).

The SFS subsidized scheme was first introduced on 1 November 2002 in Region IV, in the southeastern part of the country. This represents one of the country's largest transfers of funds and responsibilities to the local level. The subsidized regime has since been introduced in Regions III and V and has approximately 400,000 participants. These three regions together represent 4.3% of the total population.

Introduction of the SFS contributory scheme (which includes civil servants, private employees, and their dependents) has been postponed by the National Social Security

Council nine times in the last five years. This delay has prevented 30% of the estimated population under this regime from accessing the Basic Health Plan. Implementation of the SFS is being analyzed at the highest political level.

Relative to the overall health sector reform, organization of the National Health System's response to HIV has taken on somewhat different characteristics, since the functions have been concentrated in the two entities responsible for coordinating and carrying out the health system response in the country: COPRESIDA and DIGECITSS.

While DIGECITSS has experienced much positive strengthening in terms of both infrastructure (planning, management, regulation, and supervision) and development of qualified human resources, at the same time it has also assumed and strengthened functions that duplicate responsibilities already assigned to other areas.

To a large extent, this duplication of functions is related to the demands imposed by the rapid expansion of units to provide care for the delivery of services to persons living with HIV. In this process, DIGECITSS has assumed, in addition to the role of managing the units that deliver services, responsibilities related to qualifying and equipping the units and purchasing and distributing drugs.

Some of these functions have also been assumed by COPRESIDA, an entity which, in addition to coordinating the national response and establishing policies and strategies on HIV, has been turned into the Executing Unit for external funding from the World Bank, the Global Fund, and the Clinton Foundation.

According to the law that created COPRESIDA, it was originally intended to be the regulatory agency overseeing the country's response to HIV. Since then, however, it has taken on responsibility for the definition of national policies and strategies at the intersectoral level. Its role in the national response to HIV has become intertwined with leadership of the National Health System, which is clearly the responsibility of SESPAS.

Although COPRESIDA was envisioned as an entity that would transcend the health sector to guarantee an "expanded," intersectoral response to the epidemic, in practice, its actions fall within the context of the public health response to HIV, which is coordinated and directed by the National Health Service. This situation was reinforced by a presidential decision of December 2006 to place the administration of COPRESIDA once again under SESPAS.

The evaluation team's interviews with key informants and analysis of the data revealed a high degree of complexity and confusion in the delimitation of roles and functions, as well as considerable duplication of agencies, mechanisms, and coordination and management, which undermines the National Health System's overall ability to render an efficient and effective response to HIV. For example, Table 8 compares the institutions involved with COPRESIDA with those involved with the Global Fund's Country Coordinating Mechanism (CCM) and shows the similarity between the two. There is also

a lot of similarity between the coordinating functions of these two agencies, although the CCM is limited to the Global Fund project.

In parallel with the health system reform process, there continue to be agencies and vertical mechanisms for leadership and coordinating the response to HIV that clearly represent a duplication of functions. These duplications need to be reviewed in the context of the sectoral reform under way.

Table 8. Comparison of COPRESIDA and CCM Structures	
COPRESIDA Institutions	CCM Institutions
SESPAS (Secretary of Health – President, Executive Director of COPRESIDA)	SESPAS (Secretary of Health)
Executive Director, COPRESIDA	BP AIDS - COPRESIDA
	BP TB - PROFAMILIA
IDSS (Director or Director) – Vice President	
Technical Secretariat of the Presidency	
Secretariat of State for Education	Secretariat of Higher Education
Armed Forces Medical and Health Care (FFAA)	
National Private Enterprise Council (CONEP)	Private enterprise
Network of People Living with HIV (REDOVIH)	Network of People Living with HIV (REDOVIH)
Coalition of Organizations that Work in HIV/AIDS	Coalition of organizations working with HIV/AIDS (Secretariat)
	Church
	PAHO
	Coordinator, UNAIDS Theme Group on HIV/AIDS

The evaluation found significant weakness in the leadership exercised by the national health authority, which undermines the National Health System’s overall ability to efficiently and effectively respond to HIV. Mechanisms and processes are needed to generate synergistic ties between the different entities in the system.

The interviews with key informants and the analysis of information revealed considerable complexity and confusion in the delimitation of roles and functions, along with a high degree of duplication in the coordination and management mechanisms and processes. This situation is aggravated by the requirements imposed by external funding agencies to establish specific vertical organizational structures for the management of funds.

However, according to existing legislation and current agreements, SESPAS is the highest authority and is supposed to preside over all entities involved. Accordingly, there is solid potential for strengthening the health authority’s steering role in the near term.

An important aspect of exercising leadership is the capacity to allocate resources based on established priorities and national strategies. In this sense, the leadership capacity of SESPAS has been limited. In terms of being able to make resources available for the country, COPRESIDA, as the executing agency for the two most important projects, makes the day-to-day decisions regarding the allocation of resources.

4.3.2. Strategic Leadership and Management, and Management Monitoring and Evaluation

The National Health System's strategic management of HIV is based on centralized, vertical processes of planning, monitoring, and evaluation which, rather than starting from a strategic national perspective, have been built around responding to the two major projects that are currently financing HIV activities (the World Bank loan and the Global Fund grant). The period covered by the National Strategic Plan for HIV/AIDS (PEN) ended in 2003 and a new version was in the process of being prepared at the time of this evaluation.

Currently, COPRESIDA is engaged in a highly participatory national process of preparing the new PEN, which involves both national and local stakeholders. This process is expected to produce a plan that calls for multisectoral approaches to the HIV situation in the different regions of the country.

While formulation of the new PEN, and, moreover, the subsequent processes of implementation, monitoring, and evaluation offer opportunities to strengthen the response to HIV, they also pose major challenges for strengthening the Health System's integrated response. SESPAS, as the National Health System's regulatory agency and the entity that oversees COPRESIDA, will have to develop mechanisms for integrating these vertical planning processes harmoniously into the Health System's own characteristic planning processes, expressed in PLANDES, as well as its mechanisms for operational implementation.

It is important for SESPAS, as it formulates the PEN, to identify mechanisms for articulating with PLANDES and the National Health System's strategic planning, monitoring, and evaluation processes in order to minimize duplication of effort and resources.

At the national level, the responsible agencies have annual operating plans and ongoing processes for monitoring activities through meetings with technical teams. However, this monitoring has more to do with overseeing the processes than looking at the impact of the actions taken. This is largely because the 32 goals that have been set are quite distinct and tend to be more project-based than reflective of the Health System's priorities. At the regional and local levels these processes are more limited.

Generally speaking, the DPSs, DRSS, and the health facilities have only limited knowledge of the epidemiological picture and therefore do not understand the local situation. Knowledge about the status of the epidemic, its trends, and the groups that are most affected and most vulnerable is lacking. There is also lack of knowledge about the estimated coverage of care for persons living with HIV and the health promotion and preventive measures that have been taken in the most vulnerable population groups. Nor is there knowledge about the health needs of the transient foreign population.

A solid analysis of the situation is essential in order to set goals at the provincial level to guide the strategic planning process. SESPAS and DIGECITTS have a lot of information, but it is not being used effectively to guide planning and programming, or to monitor the impact of programs at the various levels.

Even though the provincial plans are for the most part incomplete, there is evidence that the DPSs do have some processes in place for strategic planning, monitoring, and evaluation: the majority (58%) of the DPSs visited have adopted provincial goals in line with the MDGs, with specific targets for PNTRV within the context of the “Zero Tolerance” initiative, and 67% of them carry out monitoring activities. While it is encouraging to know that specific goals for PNTRV have been established at this level, it is also necessary for the other components of the program (persons living with HIV, prevention of sexual transmission of HIV and other STIs) to have goals as well.

At the level of the DRSs, the processes of planning, monitoring, and evaluation are more limited than in the DPSs. Only one-third of the DRSs visited had a strategic plan with regional goals for HIV/STI tied to national goals (the 10-Year Health Plan, Zero Tolerance, and the MDG), processes for monitoring progress toward the goals they have established, or periodic evaluation of achievement of national and regional goals and objectives.

In a minority of cases (30%), HIV/STI planning, monitoring, and evaluation are carried out with the particular program’s DRS. Collaboration with DIGECITSS is strong in this regard (almost 100%).

As far as the establishments are concerned, more than half the hospitals (56%) have set goals for HIV/STI that are consistent with national goals (the 10-Year Health Plan and Zero Tolerance), but achieving these goals will require more effort. The majority of hospitals (61%) have monitoring and conduct periodic evaluation exercises to measure progress toward attainment of their goals and objectives in the national and regional contexts. More than half the hospitals visited (56%) carry out planning, monitoring, and evaluation for HIV/STI in collaboration with the DRS and DIGECITSS (78%).

In primary care units (UNAPs), planning, monitoring, and evaluation activities are almost nonexistent. Only 18% of the UNAPs reported planning activities undertaken in coordination with the DRSs or the DPSs, and 27% had carried out such activities with DIGECITSS. Few of the UNAPs are specifically geared to local realities: only 36% reported any planning, monitoring, or evaluation activities regarding support from NGOs, community organizations, groups of persons living with HIV, or clergy for the delivery of services.

Interviews with key informants confirmed that managerial processes are still very centralized. When the central level sets priorities and makes plans that are intended to be applied throughout the country, it is perceived as a threat that interferes with local planning. The DRSs are asking for greater definition of their role within DIGECITTS. The DPSs have other public health priorities (dengue, rubella, etc.) that slow down

progress for the rest of the programs. In the case of the national program on HIV/AIDS and STI (DIGECITSS), investments are made without discussing them with the DPSs, who become mere bystanders. The DPSs are asking DIGECITSS to recognize their steering function and share information with them.

There have been some efforts to coordinate the response to HIV by the many National Health System entities and establishments at different levels throughout the country, but there is room for improvement. The DRSs carry out planning, monitoring, and evaluation activities for HIV/STI in collaboration with DIGECITSS (60%), but this collaboration does not exist with the DPSs. However, during the evaluation, the DPS of La Romana stated that it had good coordination and support from DIGECITSS. On the other hand, in some regions it was reported (in interviews conducted in the DPS, the hospital, UNAP, or a community group) that DRS participation was very limited.

4.3.3. The Transverse Axis of Social Participation

Social participation is considered highly important in the development of the National Health System. Several opportunities for participation and co-management have been provided for at different organizational levels of the system. One of the dimensions of the steering role that has been given priority in the present administration is strengthening the participation of social organizations in the monitoring and evaluation processes, as well as in social control of the operation of services and programs (oversight).

In the period preceding this evaluation, the Executive Directorate of COPRESIDA made a concerted effort to strengthen social participation. In its annual report for 2006, COPRESIDA cited eleven population-based strategic partnerships which together represented more than 300 organizations in civil society. COPRESIDA has helped these organizations gain access to financial resources from both the Global Fund and the World Bank or to small amounts for specific interventions,²⁵ through contractual agreements as sub-beneficiaries.

COPRESIDA has made efforts to integrate the various organizations that bring together people living with HIV through their participation as members of the Council, through the oversight mechanisms for projects financed by COPRESIDA such as Sinergía, or by involving persons living with HIV in activities sponsored by COPRESIDA at the local or international level (UNGASS 2006, Toronto).²⁶ One of the innovations introduced by COPRESIDA during this period has been to hire persons living with HIV to serve as peer counselors in the CCUs and as overseers of service delivery.

The evaluation found that the relationship between COPRESIDA and nongovernmental organizations, especially the system for contracting representatives from the affected community, is threatening real achievement of this priority. The perception of many

²⁵ COPRESIDA, Memoria Anual 2006

²⁶ COPRESIDA, Memoria Anual 2006

persons involved, expressed in discussion groups with representatives of NGOs and persons living with HIV, is that signing contracts with civil society organizations interferes with exercise of the oversight function, since “you cannot criticize your boss.”²⁷ Another point that should be considered is the sustainability of these interventions, since participation mechanisms have been established that are too dependent on the availability of external funding, which will be gradually reduced.

Another important aspect of social participation is the high degree of involvement of NGOs that offer valuable support for care. However, the benefit of these partnerships is undermined by practices in health institutions that correspond more to principles of grassroots religious organizations than to evidence- and public health-based principles. For example, in the field visits it was reported that in some of the hospitals that have PNRTV programs in place there are agreements with religious groups that explicitly exclude promotion of condom use and family planning. These agreements go against national health policies and threaten the sexual and reproductive health rights of Dominican women. To address this situation, it is urgent for SESPAS to facilitate partnerships with grassroots religious organizations that are based on national health policy and designed to strengthen the public health approach.

4.3.4. Transversalization of the Gender Approach in the National Health System Response to HIV

In the development of the National Health System, it has been considered necessary to promote a better understanding of gender-based needs and their impact on the health of populations, as well as to strengthen the gender approach within the National Health System. This aspect is currently being addressed through the notion of “gender population base” defined by COPRESIDA.

The approach, as explained in the Annual Report 2006, is limited in terms of content of population-based actions, since the initiative is essentially directed toward meeting the needs of women (through “measures and mechanisms to affect the reduction of HIV in this population”) and counteracting gender inequalities through their empowerment.

It is important to point out that, conceptually, it is difficult to define a “gender population base,” since the gender approach should permeate prevention measures for all the population bases: young people, men who have sex with men, children, adolescents, etc. The present evaluation found that health workers had received little training in the gender approach as it relates to providing comprehensive HIV care.

²⁷ PAHO/WHO: Summary of direct interviews with NGO representatives and persons with HIV.

4.3.5. Regulation

One of the important aspects of the National Health System's steering role is the ability to implement policies, standards, and procedures to guarantee equal access to quality services.

As mentioned earlier, DIGECITSS has treatment standards and protocols for persons living with HIV, prevention of vertical transmission (PNRTV), and STIs. However, compliance with these standards is low in the services network establishments, especially the protocols for PNRTV and STIs, and their auditing and accountability mechanisms are inadequate.

DIGECITSS has established mechanisms for monitoring the delivery of comprehensive care for persons living with HIV, PNRTV, and STIs based on the difference between supplies actually ordered and what would normally be required. Reports of supplies ordered in excess of compliance with the standard are considered contradictory. Once the status of service delivery has been documented in terms of quantity and quality, there are no mechanisms for implementing the recommendations made except in the comprehensive care units (based on DIGECITSS referral).

4.3.6. Stigma and Discrimination in the National Health System

One aspect that is central to the steering role is the high degree of reported stigma and discrimination on the part of some service providers toward persons living with HIV. According to comments made in the discussion groups that included the participation of persons living with HIV, it is common for medical services to be denied to persons known or believed to be infected. These people also described cases of denial of surgery, delivery care, and dental care and reported that in public hospitals there is no respect for confidentiality, which leads to attitudes of rejection by personnel at all levels (physicians, nurses, cleaning staff, receptionists, and others).

SESPAS does not have an explicit policy on HIV in the workplace, nor does it have an action plan for reducing stigma and discrimination in health services. And, even though DIGECITSS and COPRESIDA have made efforts in this regard through health worker training aimed at reducing stigma and discrimination, the effects have not reached all service providers in the network. The key personnel interviewed assure that steps are being taken to react to stigma and discrimination based on the number of complaints filed in a given institution.

At the same time, it is important to point out that CCUs are recognized to be friendly services where stigma and discrimination have been significantly reduced, a process attributed to the training their staff have received. Thus the country does have experience to build on in working with the rest of the health personnel, and SESPAS is in a position to implement a zero tolerance policy regarding stigma and discrimination toward persons living with HIV and vulnerable groups.

Stigma and discrimination are worse for Haitians with HIV. SESPAS policy obliges the health services not to reject anyone, including immigrants of Haitian origin who come to health facilities for care. According to data provided by DIGECITSS, 21,200 pregnant women of Haitian nationality received prenatal health care services during 2003-2004. The prevalence of HIV infection in this population was approximately the same during this period (2.05 in 2003 and 2.03 in 2005). However, in field interviews, there were comments about the difference in treatment given to this population by some providers.

A disturbing situation mentioned in the discussion groups was the perception of some people living with HIV that the HIV problem is related to the presence of the Haitian population. References to “the epidemic brought by the Haitians” and remarks such as “Haitian women only come to use our services,” “the problem is especially serious in the *bateyes* and we have to stop immigration” indicate the need to conduct sensitization programs and change attitudes in the HIV community.

It seems that the uncertainty around the possibility that access to treatment might be interrupted when current funds run out is giving rise to attitudes of discrimination among persons living with HIV, expressed in comments such as “It’s not fair that resources meant for the Dominican Republic are being used to treat Haitians who live in the *bateyes* or come here for treatment. Let the Haitian government take care of them.”

This dimension of stigma and discrimination needs to be dealt with because it stands in the way of guaranteeing progress toward the goal of universal access. For this reason, it is important to develop sensitization and education strategies that address the false perception that the HIV problem in the Dominican Republic is “imported” by the migrant population and explain the role played by population movements in HIV transmission, both within and from outside the country.

It is necessary to consolidate processes under way to develop a binational strategy that will make it possible to optimize existing resources to guarantee access to prevention and treatment services for the migrant population of Hispaniola. For such a binational process, it is essential to have a situation analysis that deals with the island as a whole.

4.3.7. Aspects of Providing Individual Care

The National Health System’s role of providing care for individuals is shown in the formation and development of public health services networks. These networks should be decentralized, geared to specific populations, geographically based, and structured according to levels of care and services for specific life cycles. SESPAS has stipulated that the Regional Health Directorates (DRSs) are responsible for decentralizing and structuring the networks. The DRSs are responsible for organizing, developing, and managing the regional health services networks, which are regulated by the Undersecretariat of Individual Care.

The levels of care in the health services networks are as follows:

- Primary level: On the basis of population and geographical needs and one Primary Care Unit.
- Specialized care at different levels of complexity (municipal hospital, regional hospital, national hospital) with beds available for hospitalization.

4.3.7.1. HIV Care Model, Public Services Networks, and Health Sector Reform (Separation of Functions)

Since the Dominican Republic has made the decision to offer HAART on a delayed basis as an emergency measure, DIGECITSS has focused its efforts on expanding the availability of health care services, creating new comprehensive care units (CCUs), and developing PNRTV as an integral part of maternity services.

Additionally, DIGECITSS began to expand distribution of prepackaged treatment kits for syndrome-based management of STIs. These efforts have been supported by COPRESIDA, which, as explained before, handles most of the available financial resources (the Global Fund grant and the World Bank loan). In the early stages, establishment of the first CCU had technical and financial support from USAID and the PNRTV had support from UNICEF. For the most part, these initiatives were not coordinated or monitored by the Undersecretariat of Individual Care or the DRSs.

The evaluation found that these services have been structured with little advance planning, based on various organizational models for the delivery of care. At the same time, they are operating in the midst of the process under way to reorganize the health services networks and implement the separation of functions as part of an overall health sector reform. In general, a parallel system of care management has been established for HIV/STI, demonstrated particularly in the CCUs. Meanwhile, the PNRTV and syndrome-based management of STIs, due to their nature, are more integrated into regular services.

In the following paragraphs this report goes into a more detailed analysis of the CCU care model, given the future implications of integrating HIV care into the services network and sustainability issues for the CCUs.

Between 2003 and 2006, the number of comprehensive care units grew impressively, from 14 in 2004 to 46 in 2006. Currently, there are CCUs in place in main cities throughout most of the national territory, although not in all provinces. Most of the CCUs are located in third-level or provincial hospitals or in clinics devoted exclusively to the care of persons living with HIV.

During field visits, it was found that the installations in these clinics are of good quality, their structure has been suitably adapted, the human resources are trained, drug availability is good, and there is an information system in place for monitoring patients. However, the CCU network is managed directly by DIGECITSS and is not functionally integrated into the health services network.

One important aspect that needs to be pointed out is human resources management. Although health workers in the CCUs are assigned by SESPAS, they receive additional compensation from the projects and work exclusively in the delivery of services for persons living with HIV. In the end, this means that a new category of personnel has been created outside the SESPAS human resources structure, both in terms of the definition of responsibilities and duties and with regard to levels of supervision and salaries and benefits. This issue is discussed in greater detail in the section on human resources.

The CCUs basically provide outpatient care. Even though these services need to work closely with other services offered by hospitals for the comprehensive care of persons with HIV, the referral and counter-referral mechanisms are unclear and they vary depending on the initiative of individual providers. The evaluation team did not have access to any standards for hospital management of HIV.

Neither DIGECITSS nor COPRESIDA has current plans that include the option of hospitalization for persons living with HIV or other specialized services that cannot be provided by the CCUs. In fact, hospital discharge statistics for HIV were not available for this evaluation, nor are they known to DIGECITSS. This gap reflects a deficiency in the model that aims to guarantee continuous comprehensive care, and it points out the need for the normative and planning/programming levels to work more closely with the network. Because of this lack of articulation with in-hospital services, it is likely that many opportunities are missed to capture patients who are already showing signs of immunological deficiency and who need to start ARV treatment immediately.

The present model for achieving the goal of universal access with sustainability gives rise to the following implications:

Encouragement of stigma. Even though, in the short term, the exclusive dedication of infrastructure to persons living with HIV and the provision of high-quality services with compassion constitute privileged outpatient care for this population, the arrangement actually serves to encourage stigma toward those who come to the CCUs, since it is impossible to preserve confidentiality. Both users and health workers in the establishments know that people who come to the CCUs are persons living with HIV.

Even though there is no information available in this regard, it may be assumed that this situation could keep persons with HIV from seeking care (as mentioned earlier, the CCUs only captured 21% of the estimated population of persons living with HIV in 2006).

Increased costs of care. The evaluation team did not have access to information for calculating the total cost of care in the CCUs. However, it is reasonable to assume that the cost of operating these units is much higher for the rest of the services, both because external funding is being used to pay for the infrastructure and remunerate personnel at levels well above the SESPAS salary scale, and also because the system for supplying and distributing ARV drugs is parallel and separate from that of SESPAS.

The cost of care is also higher because of the disparity in the volume of patients in different units (some report that they are monitoring fewer than 20 patients). These factors have many implications for future decisions regarding expansion, especially when the services network would still have to take care of the estimated 80% of persons living with HIV who have not yet been captured.

Distortion of salaries and working conditions: This subject will be dealt with in detail in the section on human resources.

Dilution of the services network's responsibility to provide integrated HIV care.

Interviews with key informants revealed that there is some confusion about recognizing the services network's primary responsibility to provide integrated care for persons living with HIV. Many health providers look upon the service provided to persons with HIV as an additional task outside their regular duties, since this service is the responsibility of DIGECITSS.

DIGECITSS believes that the Undersecretariat of Individual Care has failed to assume responsibility in this area, and the Undersecretariat, for its part, cites the vertical management structure of DIGECITSS. Given this apparent confusion, it is incumbent on SESPAS to clearly define the roles and responsibilities of the entities involved in comprehensive HIV care in the context of the new separation of functions and to make them known. There is also need for a sustained effort to strengthen the Undersecretariat of Individual Care and the services network, providing the resources and capacities for progressive transfer of care management from DIGECITSS to the network.

Geographical barriers to access. The fact that outpatient care, including primary care, is provided at units located in urban hospitals poses a barrier to access by persons with HIV who live in remote areas and are not near a hospital. For example, in discussions with users of the PNRTV services, it was mentioned that the free test is only offered in a few places (usually in hospitals) and not in most of the UNAPs or rural clinics where women go for prenatal checkups. The women report that it takes them a long time and costs a lot of money, because sometimes they do not have the fare to go to the hospital; they have to take a bus, which costs 40 pesos, and also pay for the tests.²⁸

4.3.8. Content of Comprehensive Care for Persons Living with HIV

As mentioned earlier, the country has made the commitment to provide comprehensive care for persons with HIV, including ARV treatment. Responsibility for this care is assumed by DIGECITSS through the CCUs. The field visits identified many strengths in terms of the quality of care and compassion with which it is provided in these units for persons living with HIV. The CCUs visited are equipped to provide a range of services

²⁸ Participants in the focal groups of PNRTV users report that currently people who do not have insurance coverage have to pay RD\$150 for laboratory tests, including the test for HIV. Those who are currently registered with the National Health Service are still a minority.

that guarantee comprehensive outpatient health care for persons living with HIV (children and adults), including monitoring and clinical follow-up, counseling, nutrition, treatment of opportunistic infections, prevention measures, health promotion (especially among vulnerable groups), management of prescription ARV drugs, and reporting of adverse reactions. The CCUs have access to laboratory tests for HIV diagnosis and clinical staging, as well as for the diagnosis of opportunistic infections. They also have good access to general clinical, pediatric, and dental care.

The evaluation team can infer with a reasonable degree of confidence that once a person with HIV contacts the CCU and is able to maintain contact, the care provided makes it possible to identify the need for ARV in a timely manner. Currently it can be stated that all patients under CCU monitoring who need ARV treatment are receiving it. The interviews revealed a high level of satisfaction among users of the CCUs.

As for weaknesses in care content, the following points were noted:

- Steps are not being taken to induce demand for early capture (preventive actions, information-education-communication (IEC) for the population by population subgroups, etc.)
- Free testing is not offered to the general population or to populations at greater risk, such as users of STI and TB services. HIV testing is offered to those patients who present clinical symptoms or who spontaneously request it, but it costs \$100–\$200. Expansion of these services, including media campaigns to promote testing, is included in the Annual Operating Plans for both DIGECITSS and COPRESIDA.
- There is no early case-finding except for diagnostic tests prescribed on the basis of clinical symptoms or specifically requested by the patient.
- No steps are taken to promote comprehensive HIV health care services, and there is very little interaction between CCUs and communities, which means that less advantage is being taken of community potential to improve and strengthen services.
- There are shortcomings in the delivery of important services such as post-exposure prophylaxis, care for women victims of sexual violence, and care for tuberculosis and STIs.
- Support groups for persons living with HIV only exist in 50% of the CCUs (8/17).
- There are referral and counter-referral systems in only seven of the 12 hospital units.
- Access to surgical care, including obstetric care, is limited

Responsibility for comprehensive care of persons living with HIV has not been totally assumed and integrated into the UNAPs and hospitals (i.e., hospitals other than those with CCUs and UNAPs, where it is virtually nonexistent). Table 9 summarizes the main strengths and weaknesses that the evaluation team found in the hospitals visited.

Table 9. Strengths and weaknesses observed in the hospitals	
Strengths	Weaknesses
<ul style="list-style-type: none"> • Availability of trained, high-quality human resources (except for counseling) • Broad array of available services • Majority of the installations of good quality with well-equipped infrastructure • Church-supported care despite conflicts regarding prevention (condom/family planning) 	<ul style="list-style-type: none"> • Lack of staff trained in counseling • Failure to capture the patient after the test, reflected in the low number of CD4 counts requested (11 per year in the hospitals studied) compared with the number of positive tests (>300 per year). • No standards in place in 25% of the hospitals • No educational materials available in 25% of the hospitals • Post-exposure prophylaxis available in only 60% of the establishments • Care for women victims of sexual violence provided in fewer than the 50% of the establishments • Care for STIs available in only 50% of the hospitals (lack of prepackaged treatment kits in some of the provinces). The test for syphilis is hardly ever requested: 107 requests for syphilis compared with 22,800 for HIV in one year. • Problems of biosafety • Cases of discrimination • Problems of confidentiality
Source: PAHO/WHO	

Integrated Care of Women and Prevention of Mother-to-Child Transmission and Congenital Syphilis

The PNRTV strategies include sex education, prevention of HIV infection, prevention of unwanted pregnancies, and reduction of mother-to-child transmission. These strategies are implemented through specific measures such as pre- and post-test counseling, case-based administration of ARVs, cesarean section, arrangements for replacement feeding, and monitoring of mothers and children included in the program.

The section above on analyzing gaps commented on the National Health System's performance in terms of measures that should be taken for every pregnant woman with HIV in order to effectively reduce HIV transmission, and identified missed opportunities.

Now a more detailed analysis is presented of some of the findings in technical and administrative areas that have hindered implementation of the PNRTV. This section will also include comments on the new protocol being adopted for the management of mother-to-child transmission based on triple therapy and elimination of the single dose of nevirapine.

Even though almost all pregnant women have prenatal checkups and deliver in hospitals, the PNRTV captures less than the 40% of all pregnant women. While the number of installations with PNRTV services and the number of pregnant women tested for HIV have increased, less than half of all pregnant women are captured. It is important to note that the majority of the country's primary care units do not offer PNRTV services or even sample screening with the HIV test.

Although it would appear that there is some improvement in HIV testing coverage of pregnant women who visit health care facilities that offer PNRTV, according to partial data for 2006, more than half of all pregnant women do not have access to PNRTV services, and therefore they do not have the opportunity to be tested for HIV to find out whether or not they are infected.

Analysis of some of the process indicators reveals the following points:

- Approximately 4 out of 10 pregnant women tested for HIV do not receive post-test counseling.
- Of the pregnant women who do not receive post-test counseling, an unknown number do not receive the result, and thus do not have the chance to find out whether or not they are infected, despite having taken the HIV test.
- Of the pregnant women with HIV who are captured and reported in the PNRTV services, in addition to the low effective coverage of mothers with HIV:
 - About 2 out of 10 pregnant women with HIV receive only partial protection against mother-to-child transmission of HIV (either cesarean section without nevirapine, or normal delivery with nevirapine).
 - Approximately 4 out of every 10 children born to mothers with HIV detected through PNRTV services do not receive nevirapine or breast milk replacement formula to reduce mother-to-child transmission of HIV, and of these children, 80% were born of mothers with HIV who were detected through the PNRTV services but did not receive any protection to reduce mother-to-child transmission.

Some of the most important causes associated with these deficiencies were the following:

- The perception that the PNRTV is still a completely vertical program persists, despite significant changes between 2004 (the date of the first PNRTV evaluation) and December 2006 (the time of the present evaluation). The perception of a vertical system continues, even though the PNRTV has coordinated efforts to prevent mother-to-child HIV transmission in the DPSs and has established prenatal health care services for delivery and puerperium in hospitals where PNRTV services were operating.
- “Horizontal” integration of the PNRTV within the Health System’s structures has occurred mainly at the level of the DPSs and in hospitals. This evaluation found that 100% of the 12 DPSs surveyed had personnel assigned to perform PNRTV duties, and 83% of the staff from 18 hospitals had knowledge of compliance with PNRTV standards and protocols. Recently there have been several initiatives to promote coordination between the PNRTV, the Directorate General of Maternal, Child, and Adolescence (DIGEMIA) and the Tuberculosis Program.
- The PNRTV has not been integrated into the UNAPs and continues to be essentially hospital-based. This is partly because of the weakness of the political

and administrative structure of UNAPs, both in terms of upward integration with their referral hospitals, the DPSs, and the DRSs, and also with respect to downward integration with organized community groups. Also, no measures have been taken to strengthen or invest in the UNAPs to prepare them to take on the first-level care actions involved in the PNRTV.

- There is a lack of monitoring in the hospitals that offer PNRTV services: 38.9% of the 18 hospitals surveyed stated that they knew how many women had delivered without being tested for HIV and knew how many women with HIV had failed to receive nevirapine.
- Proper infrastructure is needed to apply the current protocol. Several of the hospitals visited were not equipped to perform cesarean sections – a factor that definitely keeps many pregnant women with HIV from receiving full protection, which includes both cesarean section and nevirapine.
- Stigma and discrimination continue to be perpetuated by some service providers. Cases were cited in which physicians refused to perform a cesarean section on a woman with HIV, and even cases in which pregnant women with HIV were afraid to reveal their HIV infection when they went to the hospital because of openly discriminatory attitudes and comments about persons living with HIV on the part of staff in delivery services.

Within this organizational context, DIGECITSS is in the process of changing the standards for the PNRTV by adopting a new protocol for managing the reduction of mother-to-child HIV transmission based on triple therapy instead of the single dose of nevirapine.

Introduction of the new combined ARV regimen to more effectively reduce mother-to-child HIV transmission is based on broad scientific evidence.^{29,30} This regimen offers many advantages and is in keeping with PAHO/WHO recommendations for operational situations in which the installed capacity is available for administering the new prophylactic regimen. However, PAHO/WHO recognizes that, depending on the organizational context and a country's particular situation, it may be necessary to administer the NVP regimen in a single dose (NVP-du) until then as steps have been taken to overcome any obstacles to effective administration of these regimens.³¹

The evaluation team is concerned about introducing a change in regimen in the current situation, in which effective coverage with a rather simplified scheme is only 9%. It is

²⁹ European Collaborative Study. Mother to child transmission of HIV infection in the era of highly active antiretroviral therapy. *Clinical Infectious Disease*. 2004; 40:458-65.

³⁰ Prevention of mother to child transmission of HIV infection. Luzuriaga K, Sullivan JL *Clin Infect Dis* 2005;40:466-7.

³¹ OPS/OMS: ARV para el tratamiento de embarazadas y la prevención de la infección por el VIH en los lactantes en Latinoamérica: Recomendaciones para un enfoque de salud pública. Draft document.

recommended that, before the new regimen is implemented, SESPAS undertake a detailed analysis of the proposed plans and consider the following questions:

- With implementation of the new ARV regimen to reduce mother-to-child HIV transmission, will coverage with complete protection, including quality services for the country's pregnant women with HIV, increase, decrease, or remain the same compared with the current regimen?
- With implementation of the new ARV regimen to reduce mother-to-child HIV transmission, will the rate of HIV-infected children born to the country's mothers with HIV increase, decrease, or remain the same compared with the current regimen?
- Could the provision of HAART for mothers with HIV who need treatment be strengthened without changing the prophylactic regimen for the prevention of mother-to-child transmission in women for whom HAART is not yet indicated? What proportion of mothers with HIV currently need HAART services in order to maintain their health?
- What proportion of women of childbearing age who need HAART are not receiving it? How could the HAART coverage be increased in this population through the CCUs?
- What infrastructure, staff, and supplies are needed in order to implement the change in regimen?
- What needs to be changed in the health services in order to guarantee a rapid increase in effective PNRTV coverage while the new regimen is being introduced? What obstacles need to be addressed?
- What would be the most cost-effective way to implement the new regimen?

Well-founded answers to each of these questions will ensure a precise analysis of the substantial benefits to be gained in terms of impact (reduction of infant mortality) from the decision to implement the new ARV regimen for the reduction of mother-to-child HIV transmission.

The evaluation team considers that the most important factor in deciding whether or not to implement the new HAART regimen is determining in advance whether the strategies being adopted to implement it can significantly increase effective coverage with quality services for pregnant women with HIV in order to reduce mother-to-child transmission.

This decision is so serious that the planned measures should be examined closely to make certain that, as they are introduced, there will in fact be a significant increase in coverage and quality of services and, even more important, no reduction in the level of coverage compared with the year before as a result of any unwanted or unforeseen effect of implementing the new regimen.

The following measures might be considered as part of implementing the new regimen:

- Rapidly expanding comprehensive health care services, including HAART, for women of childbearing age with HIV, especially pregnant women, which could be accomplished by enlisting the cooperation of existing family planning or reproductive health services and implementing a provider-initiated strategy of HIV testing and counseling for this population in any contact the woman has with the health services;
- Improving the quality of health care services during the prenatal period, childbirth, and puerperium in all establishments;
- Expanding services and interventions to prevent the sexual transmission of HIV in women of childbearing age, with emphasis on adolescents and young adults;
- Adopting a programmatic approach with implementation of the new regimen in successive phases: first, after a well-documented analysis of the situation, identification of pilot sites for introduction and evaluation of the new regimen; then, based on the results of the evaluation, definition of successive phases. It is important to emphasize that implementation of the new regimen needs to be accompanied by specific activities aimed at improving the quality of health care services for the prenatal period, childbirth, and the puerperium in the selected services and at the different levels, as well as strengthening the primary care level.
- Continuing with implementation of the current regimen in the establishments that are not included among the pilot sites or in the step-wise phases identified for implementation of the new regimen.

4.3.9. Management of Antiretroviral Drugs, Other Medications, and Basic Supplies

4.3.9.1. Policy on Drugs

Although the Commission on HIV/AIDS Medications formulated a proposed policy on ARV drugs in 2001, the process was not completed. This proposed policy was intended to cover, among other points, aspects relating to the supply of drugs needed in order to care for the population living with HIV. COPRESIDA has given consideration to resuming work on this policy for inclusion in the Annual Operating Plan for 2005-2007.

In the meantime, the Presidential Commission on National Pharmaceutical Policy (COPPFAN) has yet to establish mechanisms for coordinating actions with those involved in access to drugs for HIV and AIDS, for which it is responsible. It is essential that these two entities, COPRESIDA and COPPFAN, work together to avoid duplication of efforts and approaches in this area.

4.3.9.2. Guaranteed Access to ARV Therapy and Treatment for Opportunistic Infections and STIs

A review of the Law on AIDS 55-93 indicates that it is designed more to protect and assert the rights of the population living with the syndrome rather than to spell out steps

that could be taken to guarantee access to comprehensive care. This law has been under review since 2002, which presents an opportunity to introduce specific language regarding the right of persons living with HIV to ARV therapy.

Various interviews in the central and regional levels and in the care units have confirmed that the patients who are in treatment have regular access to ARV drugs and medication for opportunistic infections. The problem, however, is the patients who need treatment and have not been captured, as pointed out in the section on gaps.

Distribution of Patients by Line of Treatment

The lack of solid, agreed-upon information on how patients receiving HAART should be divided by line of treatment makes it difficult to calculate projections and offer recommendations regarding the use and cost of drugs.

DIGECITSS provided two sets of information in January 2007 and March 2007. Tables 10 and 11 show these sets of data as Estimate I and Estimate II, respectively. For example, the evaluation team was informed that in 2005, 20% of the patients were receiving second-line treatment. Two months later, this figure was reported to be 10.79%. The data for 2006 showed discrepancies as well. The first report stated that 9.27% of the patients were receiving second-line treatment, whereas the second report put the figure at 11.45%. In other words, the information regarding the distribution of patients between first-, second-line, and rescue treatment is inconsistent.

Regimen	2005	2006	2007 (estimate) (DIGECITSS)	2007 (estimate) (COPRESIDAS)
First line	1,920 (80%)	3,934 (90.7%)	6,998 (87.5%)	6,298 (90%)
Second line	480 (20%)	402 (9.27%)	1,002 (12.5%)	700 (10%)
Total	2,400	4,336	8,000	6,998

Source: Information submitted to PAHO by DIGECITSS and COPRESIDA in January 2007.

Regimen	2005	2006	2007 (estimate)
First line	1,885 (89.2%)	4,389 (88.2%)	
Second line	228 (10.8%)	570 (11.45%)	
Rescue		4	
Others		11	
Total	2,113	4,974	6,988

Source: Information submitted by DIGECITSS in March 2007.

4.3.9.3. Legislation and Regulation

With regard to the Government's current leading role in the regulation, monitoring, and control of drugs, the Directorate General of Drugs and Pharmacy has been unable to take over surveillance, control, and post-marketing of the drugs used in this program in particular or surveillance of the drugs on the national market in general.

The Director of Drugs and Pharmacy reported that at the time of the evaluation there was no infrastructure or staff to take on inspection of pharmaceutical establishments at the regional and local levels. Currently, the ad hoc administrative procedure for admitting ARV drugs into the country does not comply with the technical requirements for sanitary registration. This deficiency, coupled with the fact that there is no post-marketing surveillance, means that there is a high of chance of drugs not meeting quality assurance standards.

This situation is delicate, since the quality of drugs is a decisive factor in controlling ARV resistance and the challenge involves regulating a powerful industry, which requires a strong national health authority.

Effect of the Free Trade Agreement between the Dominican Republic, Central America, and the United States of America

Incorporation of the TRIPS Agreement into intellectual property legislation in 2000 marked the beginning of a patent protection period of 20 years applying to drugs. In 2006, the Dominican Republic ratified the United States-Dominican Republic-Central America Free Trade Agreement (CAFTA) which requires that changes be made in national legislation and that innovators be granted test data exclusivity for five years.

Decree 625-06, approved in December 2006, spells out the relationship between sanitary registration and the concession of patents or the protection of test data. It states that the national regulatory authority may not register a drug that is a copy of one that is patented or protected under test data exclusivity.

This situation, because of its impact on the financing of drugs, can have a short- or medium-term effect on the early launch of generic drugs and, specifically, drugs for persons living with HIV when rescue therapy or treatments for catastrophic diseases are needed.

4.3.9.4. Quality Assurance

The drug purchasing mechanism delegated to the Clinton Foundation by COPRESIDA involves a prequalification system, a roster of qualified suppliers, and a system for sending out an alert on any of the products purchased that makes it possible to take timely action if necessary.

Under the Global Fund project, the principal beneficiary is responsible for ensuring that products purchased with GFATM moneys meet the requirements set by the National Drug Regulation Agency (ONRF) in terms of sanitary registration and good manufacturing practices.

Although the document that describes the Global Fund project includes guidelines for product testing and monitoring throughout delivery and customs clearance, and national legislation requires that the results of quality testing be presented before drugs are used, in practice not all the procedures are followed for evaluating the physical and chemical quality of products acquired through the various purchasing mechanisms. The National Laboratory's Department of Drug Analysis has sufficient installed capacity, even though efforts to meet this requirement have not been initiated as yet.

The Global Fund project also requires that SESPAS facilities assume responsibility for assuring product quality during their storage and distribution. However, there are no standards or procedures that govern this activity.

4.3.9.5. Supply System

Management of Supplies for the National Comprehensive Care Program

The evaluation noted that COPRESIDA is responsible for the management of drugs and supplies, with the participation of the Clinton Foundation and a private warehouse (Yobel). This arrangement is not consistent with the country's current legislation which assigns this responsibility to PROMESE. With regard to storage and distribution, the mechanism being used is different from what has been stipulated for the Global Fund project.

Management is centralized; participation of the DRSs and DPSs in programming to meet needs and supervise the distribution and dispensing of supplies is very limited.

Even though there is a presidential decree mandating that all drugs for the public sector be purchased by PROMESE/CAL, so far this agency has not participated in any process for the purchase of ARV drugs, prepackaged STI treatment kits, or drugs for opportunistic infections, nor do any of the People's Pharmacies dispense drugs for persons living with HIV. Both COPRESIDA and DIGECITSS have created supply systems that operate in parallel with PROMESE/CAL, thus losing the opportunity to benefit from an entire existing infrastructure for managing the purchase, storage, and dispensing of drugs in which a great deal of effort and economic resources have been invested.

By now PROMESE/CAL has developed competent negotiating power that enables it to arrange for increasingly lower prices, down to as little as 60%-70% of prices paid in previous years. In addition to its negotiating power, PROMESE/CAL performs quality assurance activities, including prequalification of suppliers and analytical controls, which it carries out in close coordination with the SESPAS Directorate of Laboratories. The

People's Pharmacies have been set up to provide quality care in addition to supplying drugs, and they are being equipped to support all activities related to monitoring drug treatment and surveillance. However, none of this structure is being used for the national response to HIV.

An interview with the Pharmaceutical Policy Commission revealed that there is a proposal to contain spending on drugs through a consolidated purchasing process that would make it possible to negotiate lower prices. The entities participating in these negotiations would be SESPAS, National Health Insurance, and the DPSs. PROMESE/CAL would be in charge of the process.

Programming of Needs and Purchases

Within SESPAS, DIGECITSS is responsible for the overall coordination of planning, distribution, and control of the use of ARV drugs, drugs for opportunistic infections, prepackaged treatment kits for syndrome-based management of STIs, and drugs for the prevention of mother-to-child transmission. To enhance this planning process, it is necessary to increase participation by the regional and provincial directorates (DRSs and DPSs), since they are not currently generating or sharing the data needed in order to have a proper, reliable, and timely estimate of the drugs and supplies to be procured.

The importance of programming for efficient use of resources is undisputed. If the information on which this programming is based is not up-to-date, and if it is not clear how patients are migrating between the different regimens, there is a very high risk of wasting some drugs and having shortages of others. From the management perspective, this aspect is extremely critical, especially bearing in mind that in the Dominican Republic second-line and rescue regimens cost approximately seven times more than first-line regimens.

Although the functions of DIGECITSS are officially restricted to the overall coordination of planning, in reality this agency is purchasing drugs and supplies with State resources. In cases of shortage it has purchased ARV drugs, and it regularly purchases prepackaged treatment kits, among other supplies. For the prepackaged treatment there are technical instructions specifying the drugs to be purchased, but the agency does not have any written quality assurance procedures for the drugs acquired, or any prequalification criteria for the selection of suppliers. It was also confirmed that the agency does not conduct any quality tests of the products that it purchases.

Although SESPAS has signed agreements with the Global Drug Facility (GDF) and the Strategic Fund, internally it has not redefined purchase policies for priority programs. This activity is up to the criteria and management of each particular program, which leads to duplication of effort, time, resources, errors, and vulnerabilities in the process. The current practice inevitably leads to unplanned local purchasing at non-competitive prices. Efforts should focus on redefining the purchasing policies of SESPAS priority programs.

Purchase Prices

Table 12 shows the prices paid to purchase ARV drugs in the Dominican Republic in 2006 and compares these prices with the reference prices agreed upon by the countries of South America and Mexico in 2005 at the second round of ARV price negotiations.

Product	Presentation	Strength	Units per vial	Dominican Republic price 2006 (a)	Dominican Republic supplier	Negotiation price 2005 (b)	Negotiating supplier 2005	Difference between DR price and negotiation price 2005
Efavirenz	Caps.	200 mg	90	19.90	Ranbaxy	33.00	RANBAXY	40% lower
Efavirenz	Caps.	200 mg	90	41.67	Merck	33.00	RANBAXY	27% more
Efavirenz	Caps.	600 mg	30	17.75	Cipla	37.50	CIPLA	52% lower
Efavirenz	Caps.	600 mg	30	19.00	Ranbaxy	37.50	CIPLA	49% lower
Stavudine	Caps.	40 mg	60	2.80	Ranbaxy	4.20	CIPLA	33% lower
Stavudine	Caps.	40 mg	60	4.00	Strides	4.20	CIPLA	5% lower
Stavudine	Caps.	30 mg	60	3.50	Strides	NN		
Stavudine	Caps.	30 mg	60	2.50	Ranbaxy	NN		
Lopinavir/ ritonavir	Caps.	133.33/ 33.3 mg	180	183.00	Abbott		ABBOTT	
Lamivudine	Caps.	150 mg	60	3.85	Cipla	6.60	RANBAXY	42% less
Nevirapine	Caps.	200 mg	60	4.20	Strides	6.00	Iquego	30% less
Nevirapine	Caps.	200 mg	60	5.04	Cipla	6.00	Iquego	16% less
Tenofovir	Caps.	300 mg	30	17.00	Golead	NN	NN	
Zidovudine	Caps.	100 mg	100	6.83	Cipla	6.70	Iquego	2% more
Zidovudine	Caps.	300 mg	60	9.79	Cipla	11.82	Ranbaxy	17% less
Zidovudine/ Lamivudine	Caps.	300/150 mg	60	12.25	Ranbaxy	16.02	CIPLA	23% less
Zidovudine/ Lamivudine	Caps.	300/150 mg	60	11.15	Hetero	16.02	CIPLA	30% less
Zidovudine/ Lamivudine	Caps.	300/150 mg	60	12.00	Cipla	16.02	CIPLA	25% less

NN =not negotiated ND= unavailable

Sources: Clinton Foundation (a) and PAHO (b)

These data show that the prices for ARV drugs negotiated by the Clinton Foundation are quite competitive and in most cases are lower than the reference prices. Only in the case of the Efavirenz 200 mg capsule was Merck paid 27% more than the reference price.

This level of strength should be maintained and efforts should be made to ensure that, once the government assumes all management of drugs, the consolidated purchasing and negotiating power will continue.

Storage and Distribution

Storage and distribution of drugs acquired by COPRESIDA through the Clinton Foundation has been subcontracted with a private warehousing firm, Yobel. This arrangement is in place even though the Global Fund project requires that the purchased drugs be stored in SESPAS warehouses. DIGECITSS, for its part, stores and distributes the drugs and supplies that it purchases directly. Thus there is a triplication of effort in the country and resources are being allocated for three different arrangements that accomplish the same purpose. The PROMESE/CAL arrangement, which uses Yobel, operates in parallel with the arrangements made by DIGECITSS.

The regional and provincial health directorates partially participate in the distribution system, mainly for the handling of prepackaged treatment kits. At the local level, the antiretroviral drugs and drugs for opportunistic infections are dispensed in the CCUs and PNRTV services, while prepackaged treatments are distributed by DIGECITSS and dispensed in the UNAPs.

There is not enough information available to calculate total spending on the storage and distribution of drugs and supplies for HIV/AIDS comprehensive care. However, according to the information received from COPRESIDA and DIGECITSS, the numbers were RD\$3,928,558 in 2005 and RD\$7,366,034 in 2006 (an 87.5% increase), with a projection of \$11,0204,461 for 2007 (a 52.1% increase). With a view to optimizing the resources available nationally, it would be of interest to compare these figures with PROMESE/CAL and DIGECITSS's spending.

The evaluation had access to a report on the inventory of supplies on hand. The value of this inventory, based on the last Clinton negotiation price levels, was US\$ 1,470,724. In view of the high value of this inventory, it would be recommendable to do a more detailed study with a view to considering future adjustments in the purchasing plans as well as immediate measures to deal with products that have slow turnaround.

Dispensing and Use in the Health Units

According to the way the response is organized, the CCUs are responsible for dispensing drugs to persons being treated for HIV. In field visits to 18 hospitals, 12 of which have CCUs on site, drugs for HIV and opportunistic infections were available in 91.7% of them, and for STIs, 41.7% – perhaps because the drugs for STIs are being provided in other pharmaceutical establishments located either elsewhere in the hospitals or in the UNAPs. Even though the available drug supply is acceptable, it is still necessary to be on the alert, since in two of these units shortages lasting longer than 30 days have been reported in the last 12 months.

Ideally, drugs should be dispensed through a pharmacy in order to ensure adequate control. However, according to the information obtained, responsibility for the management of HIV/STI drugs and essential supplies is assumed by the hospital pharmacy service in only 4 (22.2%) of the 18 hospitals.

4.3.9.6. Rational Use

Treatment Protocols

The country has a protocol, currently under review, that specifies two regimens for initial treatment and an alternate regimen to switch to in case of resistance.

In reality, between first- and second-line and rescue treatments, a total of 45 different regimens are reported to be in use. For a country that recently introduced mass treatment (2004), it could be that the attending professionals have difficulty implementing the guidelines and clinical management aspects, or that supervision and control mechanisms are lacking at central levels.

A wide variety of complex regimens are reported, suggesting that changes have had to be made because of drug resistance or toxicity. In the interviews with key informants and group discussions, it was explained that this situation is due largely to the demand for services from persons living with HIV who initiated treatment in the United States and have come to the CCUs already on complex regimens. DIGECITSS has decided to continue with the regimens previously defined for each person with HIV on a case-by-case basis. It is not known for sure how many of these persons might have been referred from the country's private sector.

The information is inconsistent regarding the numbers of patients receiving each of these regimens. Also, records often fail to show the length of time a patient has been receiving a given regimen or when a patient has been switched from one regimen to another. This large number of regimens makes drug management processes extremely complex, and it also contributes to a series of likely risks – risks of supplies running out, products not being used before their expiration date, increased costs, and loss of financial sustainability, with direct consequences for the patient, including interruption of treatment in the case of supply shortages or increased drug resistance.

Drug Surveillance

Law 42-01 assigns the function of drug surveillance to SESPAS, and it also requires importers, manufacturers, and health establishments and workers to report adverse effects caused by drugs and other health products whenever there might be a threat to the life or health of persons, if it is determined that their therapeutic effect is not valid, or if a drug fails to produce the expected result. However, no systems have been designed or set up to perform this function.

The DIGECITSS manual of procedures establishes and provides the regulations for a drug surveillance service specifically for HIV. Of the 18 hospitals visited, only 33.3% had programs for reporting adverse reactions, while 75% of the CCUs had drug surveillance programs. Based on these observations, it would appear that the manual is not being followed in all health services. This is a critical situation that should be given high priority, since adverse reactions are an important factor contributing to patient

noncompliance, and also, reports of such reactions are one of the criteria for changing a treatment regimen.

Treatment Compliance

Despite the fact that only two initial treatment regimens and one alternative in the event of resistance have actually been approved, a total of 45 different regimens are being used in the country. This number suggests that the regimens are switched fairly frequently, probably because of toxicity and resistance. Nevertheless, the incidence of toxic effects from ARV drugs requiring the regimen to be changed is relatively low and is unrelated to the high number of schemes needed for case management.

The global trends, in programs with high levels of compliance and in countries with recent mass admissions to ARV therapy, show that up to 95% of patients remain on first-line regimens for up to 24 months. This means no more than 5% to 10% of the persons being treated are switched because of resistance in the first two years. The 12% level reported by the Dominican Republic suggests a trend that is higher than the world average. This discrepancy indicates that it is necessary to evaluate and strengthen the treatment compliance programs currently in place in the Dominican Republic.

4.3.9.7. Laboratory

The laboratory component was not extensively addressed in this evaluation. Analysis of this component focused on a recent review of the STI/HIV/AIDS Epidemiological Surveillance System (MOH-DR, USAID, and CDC/GAP, October 2006), which included a section on laboratories, as well as field visits conducted as part of the evaluation exercise.

The Dominican Republic has installed laboratory capacity for performing rapid confirmation tests at 75% of its laboratory sites, 62% of which have standardized operating procedures for HIV. Of the laboratories at the second and third levels of complexity, 66% had sufficient infrastructure, equipment, and supplies. They have high-quality technical and operational human resources and offer periodic staff training. The laboratories report HIV-positive results to the national surveillance system.

However, the small and medium-sized laboratories in the public sector do not have any standardized algorithm for HIV diagnosis, and they lack internal and external quality control.

The following are some of the most important limitations found by the evaluation team:

- The laboratories' turnaround capability is at least one week, and, on average, it takes between one week and a month for services to receive the HIV test results.
- The UNAPs do not have any service for drawing and transmitting samples to support the HIV care and PNRTV programs.

- Even though the country is using rapid HIV tests, they have not been employed in the UNAPs and other services to support the rapid growth of testing services, PNRT counseling, and early detection of HIV-positive cases.
- Due to problems with the drawing and shipping of specimens for testing and the limited availability of laboratory services, users (particularly pregnant women) have to travel to a particular hospital or a health center in order to receive laboratory services.

4.3.9.8. Safe Blood

In 2006, PAHO/WHO supported SESPAS in a review of the national blood policy and national blood plan. Following are the principal findings from this review that are relevant for HIV:

- The system is divided up into 58 blood banks.
- Officially, it is understood that approximately 5% of the blood comes from paid donors.
- About 5% of the units collected (around 3,000 annual units) are “reactive” to the laboratory tests.
- There is no documentation confirming that all blood units are screened for markers of transfusion-transmitted infection.
- The prevalence rates of transfusion-transmitted infection markers are very high.
- In some blood banks, rapid tests are being used to screen the donors.

4.3.10. Public Health in the Response to HIV: Health Promotion and Prevention of Sexual HIV transmission

In the current context of sectoral reform and separation of functions, the National Health System’s public health function is expressed in the establishment of deconcentrated programs offering promotion and prevention under the strategic management of the Provincial Health Directorates. These networks follow an interprogrammatic and intersectoral orientation, and they attach special importance to social participation as a fundamental strategy for health promotion.

According to the current legislation, public health interventions are classified in terms of whether they are directed toward individuals or populations. Individual prevention interventions are offered mainly in health service establishments in the services network under management and authority of the DRSs. Therefore, in order to totally fulfill the function assigned to the DPSs, management agreements should be made with these establishments, with orientation and technical management emanating from the central level.

These management agreements establish mutual commitments to ensure that national prevention targets and standards are met. Although population-based interventions are supposed to be handled directly by the DPSs through partnerships and agreements with other governmental and nongovernmental organizations, this ideal goal is quite different

from the reality of how the National Health System has organized its HIV/STI prevention programs.

National prevention strategies are implemented by two agencies: DIGECITSS, through its Sexual-Affective Education³² Program; and COPRESIDA, through partnerships geared to specific population groups.³³ The latter partnerships are direct arrangements between COPRESIDA and NGOs at the national level and are not related to the prevention activities being carried out at the local level by the DPSs.

The assessment of strengths, weaknesses, opportunities, and threats (SWOT) conducted by the field teams did not reveal any strengths or opportunities in the area of sexual health promotion or HIV prevention at the national, regional, or provincial level. There is a widespread perception that the subject of prevention is totally forgotten in actual practice and that it is the “poor step-sister” in the DIGECITSS program for responding to the HIV problem.

The evaluation team identified the following areas of concern in terms of addressing the prevention of sexual transmission of HIV:

A strategy for sexual health promotion and HIV prevention that responds to the dynamics of the epidemic and defines the content of interventions based on evidence, cost-effectiveness criteria, and administrative and financial sustainability needs to be developed.

The analysis of the execution of funds on prevention activities presented in this report raises a number of questions regarding the quality of spending, which is scattered and isolated, consisting essentially of information, education, and communication (IEC) activities, which by themselves are not enough to lead to behavioral changes in the most vulnerable population. Vulnerable groups need access to specific prevention services such as counseling on risks, development of customized plans for risk modification, assistance with sexual and reproductive health issues (including access to condoms and pregnancy prevention methods for the youngest population group), post-exposure prophylaxis, and integrated management of STIs.

³² The goal of the Sexual-Affective Education Program, implemented by DIGECITSS, is to integrate sex education into the school curriculum.

³³ The latest PEN defines “population groups” and calls for strategic alliances focused on these groups for the development and implementation of prevention measures with strong participation by NGOs. The population groups that have been defined so far are persons living in the *bateyes*, gays (including transgender individuals, homosexuals, and other MSM), groups targeted using the gender approach, youth, migrants, children and adolescents, persons with disabilities, and sex workers.

This analysis was confirmed by the perceptions of a number of key informants in interviews with technical and managerial personnel, discussions of the results of the evaluation, and the post-evaluation workshop. In particular, representatives of NGOs and persons living with HIV expressed their concern over the way in which prevention actions are organized through NGOs. They pointed out that, even though most of the NGOs that belong to the coalition are working on prevention, the selection of groups, goals, and achievements is not based on a careful analysis of the situation and its trends, but rather on circumstances of the moment.

This phenomenon was described by both groups (NGOs and persons living with HIV) as “projectism” – in other words, “doing things where the money is.” It was pointed out that generally speaking there are no baselines to show what is going on with vulnerable groups, so it is difficult to know where to start to plan interventions. It is also difficult to know how much coverage has been achieved, much less the impact of interventions.

An important point made by civil society organizations is that prevention activities (public information campaigns) are being geared to the least vulnerable population groups (middle class adults), while practically nothing seems to be being directed toward young women, men who have sex with men, and, least of all, people in the *bateyes*.

In its Annual Report 2006, COPRESIDA indicates that for the population base of adolescents and young adults there are currently five avenues of intervention: young people in associations, federations, and sports clubs; young people in NGOs; faith-based organizations and youth groups; adolescents in schools; young women in universities, and youth nations. The most vulnerable young people (school dropouts, street kids, children of families living in severe poverty) do not seem to be clearly identified as priority populations. Although there are no public information campaigns for the population living in the *bateyes*, the COPRESIDA Annual Report refers to a high volume of IEC-type activities being carried out within it.

With regard to the Sexual-Affective Education Program, the NGOs and persons living with HIV pointed out that, although there is a sex education program in schools, it is limited to the biological aspects and is offered too late, after a large number of young people are already sexually active or have left the school system. The evaluation did not include visits to any schools that offer this program.

The health authority has no provision for monitoring or evaluating the importance or impact of population-based interventions.

With regard to the administrative and financial sustainability of prevention interventions, currently many of them are being offered through NGOs, mainly with external financing from projects executed by COPRESIDA. The evaluation team does not know whether COPRESIDA has incorporated elements for ensuring the sustainability of these NGO measures, or else modifying the way in which they are used, once the external funding is cut back.

In the discussion groups with the NGOs and persons living with HIV, questions were raised about the modest impact of current modalities such as meetings and workshops convened and financed by COPRESIDA, which are held in expensive hotels and resorts, referring to them as *COPRESIDA AIDS-tours*. Meetings of this kind are seen as *a waste of money, since the money should be being spent on raising awareness and training people in the community, instead of always taking the same lucky people on the AIDS-tour*. Although COPRESIDA appears to have discontinued these events, it is important to look at the content of these interventions from the standpoint of cost-effectiveness in order to guide decisions in the future.

Another issue has to do with COPRESIDA and DIGECITSS's support of prevention measures and IEC initiatives incorporated into the health service delivery network. The evaluation team could not identify, at the time of their investigation, any clear mechanisms or strategies being implemented by the UNAPs or the DPSs to ensure the harmonious development of prevention services to supplement the actions being carried out by NGOs in the context of population-based partnerships. For example, the connection is not clear between the service delivery network and the 11 circuit supervisors, 120 health promotion leaders, and 2400 community promoters cited in the COPRESIDA Annual Report 2006 as the community-based prevention structure in the 120 *bateyes* covered by 31 NGOs.

The field visits revealed major weakness in the participation of UNAPs and DPSs in the implementation of prevention measures. The representatives of NGOs and persons living with HIV considered that, with few exceptions, the only prevention measures are those being implemented by NGOs.

4.4. Insurance for the Response to HIV

In order to examine the availability of insurance for persons with HIV, it is necessary to first have a look at the National Health Insurance system (SENASA) – the autonomous, decentralized public institution that is responsible for health risk management for individuals under all the schemes: subsidized, contributory-subsidized, contributory public and contributory private (chosen voluntarily).

It is estimated that in less than ten years SENASA will have nearly 5 million members, which would make it the public institution with the largest budget in the country.³⁴ Also, it is expected that SENASA will soon be the oldest purchaser of health services in the country – a distinction that will give it negotiating power to secure the best market conditions for its members and enable it to serve as the agency responsible for regulating prices for the entire system.³⁵

³⁴ On 30 March 2007, SENASA reported that it had a total of 552,536 members in the subsidized scheme and a small number in the contributory scheme, consisting mainly of SESPAS employees who have no other insurance elsewhere.

³⁵ <http://www.senasa.gov.do>

Below are summaries of some of SENASA's guiding principles³⁶ that are of special interest in light of the HIV problem and the urgent need to identify mechanisms that will lead to reducing the rate of virus transmission.

Its overarching principle, as stated on the SENASA website, is to *give the highest priority to health promotion and disease prevention in order to ensure that its members remain as healthy and productive as possible, while at the same time, insofar as possible, reducing the risks to their health. To this end, the institution is committed to developing and advancing various strategies and programs for health promotion and disease prevention. It is also committed to encouraging the development of cost-effective services, bearing in mind the goal of helping to improve the health and well-being of all Dominicans, especially those with less income. Therefore, SENASA is committed to facilitating the development of cost-effective services* (underscore added).

Furthermore, SENASA seeks to manage health risks appropriately – health risk being understood to mean the possibility that a person might lose his or her health because of some circumstance or need for care, which could be affected by biological, environmental, or behavioral factors or by the availability of health services. According to the text cited: *The essence of the risk administrator's job is to identify specific actions that make it possible to eliminate or at least reduce the causes that lead to the loss of the health. Thus, it is essential for SENASA to manage information, including epidemiological profiles; social, economic, environmental, and behavioral conditions; and the situation of health services, so that it can develop specific promotion and prevention programs aimed at reducing the impact of these factors on the health of its members.*

Finally, another principle that is extremely important, given the problems that have been described in this report, is *promoting the delivery of services through comprehensive networks. One of the pillars for guaranteeing the efficiency and quality of services is a service delivery strategy that works through networks that encourage comprehensiveness, continuity, economies of scale, and low collateral costs.*

The evaluation found that these principles are not being fully applied to the HIV problem, which suggests that this responsibility has not been totally assumed by Dominican society. For example, a key element in an effective national response is the set of incentives that the financing system offers to providers. In maternal care, to discourage excessive recourse to cesarean deliveries, as seen in systems that reimburse based on the type of service performed, SENASA has an identical rate for normal and cesarean delivery. This is a clear disincentive to use cesarean section for pregnant woman with HIV, even though the treatment protocol requires it. Although the number of beneficiaries is small, as the numbers of beneficiaries and providers increase, this reality

³⁶ <http://www.senasa.gov.do/principios.asp>

could become a substantial constraint, particularly if there is no auditing and no way of imposing a penalty on the providing service for noncompliance with the treatment protocol.

Among the exceptions to the Family Health Insurance (SFS) benefits provided under the Basic Health Plan is *antiretroviral drugs, except to prevent vertical transmission from mother to newborn. Management of antiretroviral drugs is the responsibility of COPRESIDA and SESPAS, since the former is the government's highest permanent authority responsible for dealing with HIV/AIDS and the latter is responsible for the control and management of epidemics* (Article 17 of the SFS Regulations). This aspect of health insurance policy would appear to be based on a definition of insurance and funding that entails a large contribution from external resources, since COPRESIDA relies on external resources for the management of ARV drugs, and the budgetary allocation it receives from the Treasury is for administrative costs. The SFS does cover CD4 count and viral load laboratory tests.

Although SENASA covers the cost of HIV diagnosis in pregnant women and the general population, to date the population has not had the benefit of a mass screening campaign. SENASA considers that this test is overused, based on the fact that practicing physicians appear to be requesting the HIV test whenever a patient is exposed to an invasive procedure.³⁷

Considering the information available on the cost of caring for cases versus prevention and early detection, it is suggested that SENASA, ONAPLAN, and the appropriate public agencies review the policy on health insurance. Naturally, the criterion of financial feasibility – the foundation of the Basic Plan – should be kept. What the evaluation team is suggesting is to look into how the payment mechanisms and pricing system, which affect the behavior of providers, are having a negative impact on the possibility of reducing transmission.

With regard to the prospects for financing social security, the World Bank reports that it is working with the Council for Social Policy Coordination on a loan that would be aimed at increasing social protection, to be known as the Social Sector Investment Program.³⁸

The objective of this program is to increase access of poor people, especially those without papers, to effective social programs in education, training, nutrition, and social security, thus promoting the development of human capital through education and the possibility of emerging from poverty. Negotiations have been tentatively set for June 2007. Although this new loan was not discussed during the evaluation, the group suggests

³⁷ During August-November 2006, of all the women who received HIV testing paid for by SENASA, 11% were in the subsidized scheme and the remaining 89% were in the contributory scheme. In the first group, only one case was pregnancy-related, while in the second group 24.9% of the tests were given to pregnant women.

³⁸ www.worldbank.org/external/project/procurement

that the Government explore the possibility of allocating part of these funds to finance some critical interventions in the area of HIV.

4.5. National Health System Financing and Spending on the Response to HIV

4.5.1. The Financing Context

Financing of the Health System's response to the HIV problem in the Dominican Republic is an atypical situation compared with the country's other care programs that also respond to major public health challenges. It is unique because of the large volume of resources that have been available in recent years, coupled with the knowledge that this flow is temporary. Estimates of the volume of resources handled by the public sector alone (COPRESIDA and DIGECITSS) show that during 2003-2006 the country spent a total of US\$33,785,721 on HIV, with 74.6% of this amount coming from external resources.

This high proportion of external resources relative to total financing is a temporary situation, and it implies a financial burden for the future, since almost half of the external resources (47%) come from a World Bank loan. Once the government starts paying off the loan, it will have to divert financial resources from other alternative uses – either within the health sector or elsewhere – and then Dominican society will be forced to absorb the opportunity cost for the use of this loan. However, if the resources that are available today were to be allocated over the medium and long term, it would be essential to devote some of them to improvements in the system that would make it possible to build up a response capacity that is both financially and technically sustainable.

From the standpoint of allocating resources to maximize social benefits, the objective should be to care for persons living with HIV while at the same time working intensively to reduce the rate of virus transmission and strengthen the Health System's response capacity. Otherwise, the response will always be lagging behind the epidemic. In order to achieve this objective, it is necessary to focus on the areas of care delivery (to improve the technical aspects) and the processes and criteria being followed in the allocation of resources.

The information on resources available is only a first step in the evaluation. Popular wisdom says that "the devil is in the details," and that also applies to economic analysis. The key component of this analysis is the origin of financing sources and the composition of spending by specific categories. This information is needed in order to analyze the relevance of funding and spending patterns vis-à-vis the characteristics of the epidemic and the technical options for addressing it.

Based on this premise, and bearing in mind that the present evaluation is focused on providing information on the effectiveness with which resources have been used to achieve national goals, the objective of a section such as this one is to present an analysis that will make it possible to answer the following questions:

- How much does the system spend?
- Who contributes to financing this expenditure? (external resources vs. national resources, private sector vs. public sector)
- What is the money being spent on? (treatment vs. prevention) What aspect of prevention activities? (operating expenses vs. capital expenditures, salaries vs. purchase of drugs) What type of personnel? Which drugs?
- How does the current spending pattern affect expenditure levels in the future?
- How is the expenditure executed?
- What capacity does the country have to sustain this long-term expenditure?

Being able to answer these questions with reliable information is what makes it possible to give a well-informed opinion on the degree of effectiveness with which the resources are being used, to make future projections supplemented by epidemiological information, and to offer some recommendations.

The Technical Undersecretariat is currently calculating the health accounts and intends to come up with overall information on sectoral spending. At the time of the evaluation, the Undersecretariat was processing data for a module on HIV. The National Accounts Unit was very willing to work with the evaluation team and provide the reorganized data and the itemized breakdowns needed for purposes of this exercise.

The team chose to give special importance to the use of these figures, which come from budget execution reports, in addition to other data of a more partial nature obtained directly from some of the agencies involved. It becomes clear, however, from the figures cited in this report, that the country's total funding and expenditure on the response to HIV are underestimated. A complete study of national health accounts in the area of HIV would have yielded answers to the following concerns, but that information was not available to be estimated or included here:

- In the estimate of national resources contributed to HIV, it was not possible to calculate the contributions of individuals or out-of-pocket expenditures,³⁹ or the contributions to health insurance for the prevention and treatment of HIV and associated pathologies.
- The only public spending considered was that of DIGECITTS and COPRESIDA; no attempt was made to calculate the expenditure of other public agencies, either within and outside the health sector (such as the Ministry of Education), that carry out promotion and prevention activities.

³⁹ "Out-of-pocket expenditure" refers to direct expenditure by individuals to cover the costs of prevention, care, and drugs.

- No information was obtained on the total expenditure for HIV assumed by the National Health Insurance (SENASA).⁴⁰ However, given the small number of members covered, it is expected that the amount for 2006 was relatively low.
- The information on sources of external financing includes only the monies from the Global Fund grant and the World Bank loan and does not cover contributions from other international cooperation agencies that have provided technical assistance and nonreimbursable financial resources.⁴¹

The fact that the spending is underestimated only reinforces the recommendations contained in this and other sections on the importance of introducing changes aimed at improving the cost-effectiveness of the expenditure. Table 13 summarizes the expenditure by source of funding and executing agency for 2003-2006.

	2003	2004	2005	2006	TOTAL
Global Fund	0	199,116	4,293,401	8,711,193	13,203,710
World Bank	1,849,912	3,056,340	1,792,897	5,197,359	11,896,508
Subtotal of external resources received by COPRESIDA	1,849,912	3,255,456	6,086,297	13,908,552	25,100,217
Government contribution	514,528	505,876	1,029,358	1,240,530	3,290,292
World Bank counterpart	407,125	672,753	821,417	923,080	2,824,375
Other COPRESIDA resources	0	0	0	179,750	179,750
Subtotal of national resources received by COPRESIDA	921,653	1,178,629	1,850,775	2,343,360	6,294,417
Total COPRESIDA	2,771,565	4,434,085	7,937,073	16,251,912	31,394,635
DIGECITSS	NA	NA	NA	2,291,086	2,291,086
TOTAL	2,771,565	4,434,085	7,937,073	18,642,998	33,785,721
Available NA=Not available Source: SESPAS					

4.5.2. Sources of External Funding

The Dominican Republic's response to HIV is supported by two large sources of external funding: a grant from the Global Fund, and a loan from the World Bank. For the period under review, these two sources accounted for 53% and 47%, respectively, of the external financing considered in this analysis. There are also other international agencies and bilateral donors that are providing supplementary financing to DIGECITTS and other institutions, including NGOs.

⁴⁰ Although the treatment for HIV is not covered by Family Health Insurance, the insurance does cover laboratory tests for HIV screening, CD4 count, and viral load.

⁴¹ The direct USAID contribution, channeled through the nongovernmental sector in subsequent budget years, came to the following totals: 2003: US\$ 5.5 million; 2004: US\$ 6.0 million; 2005: US\$ 6.3 million, and 2006: US\$ 6.3 million.

COPRESIDA is the agency responsible for executing the resources from the World Bank and the Global Fund. In this role, it also receives public financing corresponding to counterpart funds from the Government under the terms of the World Bank loan and an item called “Government contribution.” Table 14 shows the total resources handled by that agency (US\$31,394,635), identified by source, for the period in question.

4.5.2.1. World Bank Loan

In 2001 the Government signed a loan agreement with the World Bank for a project entitled “Prevention and Control of HIV/AIDS.” This loan, for the sum of US\$25 million, went into effect in January 2002 and was to be supplemented by national counterpart funds amounting to US\$5 million. The information available shows that the total amount executed to date has been US\$15.59 million (including the disbursement made in December 2006). Thus, US\$9.41 million still remains to be received and executed in the coming months, since the closing date of this loan is 31 December 2007.⁴²

The high level of unexecuted resources to date is troubling, since the country has assumed a debt that is accumulating service costs and yet the population is not receiving the benefits at expected rate. Three years after all the requirements were met to initiate disbursements, execution is lower than 30%. This low level of execution has been attributed to COPRESIDA’s limited administrative and technical capability and to insufficient allocation of matching funds from the Government. The World Bank’s assessment was that coordination of the national response had lacked a comprehensive, programmed approach.

In light of these concerns, and taking into account changes in COPRESIDA management and the fact that this institution had only been able to disburse US\$3.5 million between April 2005 and March 2006 (with the loan scheduled to close in December 2006), in June 2006 the World Bank’s Executive Directors approved an amendment to the Loan Agreement that extended the closing date to 31 December 2007, expanded the criteria for eligible expenditures, and increased the loan’s expenditure objectives from four to a list of nine:

- Prevention and promotion activities
- Diagnosis and basic care for affected individuals
- Epidemiological surveillance and research
- Project administration
- Financial cost
- Strengthening of coordination and administration of the national response
- Project administration

⁴² <http://www.siteresources.worldbank.org>

- Support for public sector organizations
- Support for civil society

The rationale for amending the Loan Agreement is contained in the project document presented to the World Bank's Executive Directors in June 2006.⁴³ The original purpose of the loan – namely, to reduce the risk of HIV transmission – has been expanded to include improving the quality of life of persons living with HIV and strengthening coordination and management of the response to the epidemic.

Table 14 summarizes the loan proceeds executed by COPRESIDA in 2006 under to the corresponding loan objectives. It also shows the degree of execution for 75.6% of the amount programmed to meet the original objectives (Phase I). The counterpart funds are also listed according to objectives.

The loan amendment also includes an additional heading for the cost of project management associated with the new objectives. This new heading refers to tracking the loan resources and counterpart funds received from the Government. In 2006, spending on the two management objectives (II.1 and II.7) totaled US\$1,133,275 – in other words, 21.8% of total expenditure for the year. This contrasts with the amount charged to project management corresponding to Global Fund resources, which for the same year showed a rate equivalent to 10.1% of total executed funds. The trend in expenditure execution during the period, by objective, is shown in Table 15.

⁴³ www-wds.worldbank.org/external. *Dominican Republic HIV/AIDS Prevention and Control Project (Loan 7065-DO) Project Paper*

Table 14. World Bank Loan and Government counterpart funds executed by COPRESIDA in 2006 (US\$)				
Objectives	World Bank contribution			Government counterpart ⁽¹⁾
	Programmed	Executed	Execution (%)	
II.1 Prevention and promotion of activities	411,532	180,952	44.0	58,274
II.2 Diagnosis and basic care for affected individuals	1,836,687	1,646,620	89.7	79,833
II.3 Epidemiological surveillance and research	220,471	136,996	62.1	14,236
II.4 Project administration	576,226	336,192	58.3	195,115
TOTAL PHASE I ⁽²⁾	3,044,916	2,300,760	75.6	923,080
Additional objectives				
II.5 Financial cost	-----	-----		-----
II.6 Strengthening of coordination and administration of the national response	NA	280,967	NA	37,460
II.7 Project administration	NA	797,083	NA	294,851
II.8 Support for public sector organizations	NA	1,759,604	NA	92,182
II.9 Support for civil society	NA	58,946	NA	151,128
TOTAL	NA	5,197,359	NA	923,080
⁽¹⁾ Resources executed. ⁽²⁾ Objectives established in the original project design. NA = Not applicable Source: SESPAS				

Table 15. Execution of World Bank loan by expenditure objective, 2003-2006 (US\$)					
Objectives	2003	2004	2005	2006	TOTAL
II.1 Prevention and promotion activities	647,090	623,345	627,147	180,952	2,079,534
II.2 Diagnosis and basic care for affected individuals	189,083	508,036	183,255	1,646,620	2,526,994
II.3 Epidemiological surveillance and research.	375,706	408,448	364,127	136,996	1,285,277
II.4 Project administration	638,032	1,515,510	618,368	336,192	3,108,102
II.5 Financial cost	0	0	0	0	0
II.6 Strengthening of coordination and administration of the national response.	NA	NA	NA	280,967	280,967
II.7 Project administration	NA	NA	NA	797,083	797,083
II.8 Support for public sector organizations	NA	NA	NA	1,759,604	1,759,604
II.9 Support for civil society.	NA	NA	NA	58,946	58,946
TOTAL	1,849,912	3,056,340	1,792,897	5,197,359	11,896,508
NA: Not applicable Source: SESPAS					

Comments on the Reformulation of the Loan

One of the added components is “strengthening of coordination and administration of the national response.” Adding this objective gave reason to hope that expenditures executed under this line would be directed toward conclusively strengthening the joint effort of the two public agencies that are responsible for direction and execution of the response. However, the financial data do not indicate that resources have been effectively aimed at strengthening the joint work of DIGECITSS and COPRESIDA; on the contrary, they show increases in spending more related to the content of other loan objectives.

This reformulation of the Loan Agreement was accompanied by a review of indicators and goals to be reached, contained in Annex A to the Letter of Agreement, which is summarized in Table 16.⁴⁴

Without having accurate information on COPRESIDA expenditures on these resources, it is important to guard against the temptation to expedite some sort of “speeded up execution” that will facilitate institutionalization of the distortions in the Health System that have been mentioned in the section on leadership, administration, and management of the response. Even though during the time this evaluation was being conducted the World Bank made a visit to follow up on this loan, the evaluation team has not been able to find a report on the mission, and, consequently, it is not in a position to offer an opinion in this regard.

Considering that both the World Bank and the Global Fund have targets for the number of people to be receiving HAART, it should be pointed out that this financing is supplementary and therefore it is not possible to attribute 100% achievement to either of the two funding sources. Before long there could be a risk of double bookkeeping.

⁴⁴ *The World Bank. Dominican Republic – HIV/AIDS Prevention and Control Project: proposed amendment to loan agreement. Board report 19 June 2006*

Table 16. World Bank loan, reformulated letter of implementation, (own translation)				
Development objective	Area of intervention	Outcomes	Indicators	Target dates
Reorganization of the national response, development of a national strategic plan, and corresponding monitoring and evaluation system	National strategic plan.	National strategic plan fully developed, reflecting consensus between the partners, including lines of intervention for every target population.	National strategic plan prepared, including lines of intervention for each target population	December 2006
	Monitoring and evaluation	System for monitoring and evaluation of the national response in full operation	Design of the monitoring and evaluation system fully developed, reflecting consensus between all the partners.	October 2006
			Monitoring and evaluation system implemented; some indicators available	March 2007
			Monitoring and evaluation fully operational; first annual report on status of the national response widely distributed	December 2007
	Capacity to absorb resources.	Increased national capacity to absorb available resources to finance the national response.	Amounts invested in HIV prevention and control by source of funding and implementing agency	Goals to be defined in relation to base study available in December 2006
Reduced risk of transmission and improved quality of life of infected and affected persons	Care and treatment	Increased HAART coverage	% of persons who need HAART having received it in the last 12 months	2005:33% (2,800) 2006:70% (5,000) 2007:85% (7,500)
	Social marketing of condoms	Increased condom use in the young population	% of population aged 15 to 24 in a non-stable relationship who report using a condom in their most recent sexual encounter in the last 12 months	Goals to be defined in relation to base study available in December 2006
	Voluntary testing and counseling	Improved knowledge of the population concerning their serological status	Population aged 15 to 49 who voluntarily requested an HIV	2005: 82 915 2006: 170,000 2007: 250,000

			test, took the test, and received the result in the last 12 months	
	PNRTV	Reduction of mother-to-child transmission	% of health facilities that attend deliveries and provide delivery care based on the PNRTV protocol	2005: 60% 2006: 75% 2007: 80%
	Treatment of STIs other than HIV	Improved STI diagnosis	% of patients with STIs that are properly diagnosed and treated according to national guidelines	2005: 70% 2006: 80% 2007: 90%
	Discrimination and stigma	Improved attitudes of acceptance toward persons living with HIV	% of persons in the population surveyed who express acceptable attitudes toward persons living with HIV, by environments (workplace, school, etc.).	Goals to be defined in relation to base study available in December 2006
		Reduced stigma and discrimination in the health facilities	% of health workers, of all the personnel surveyed, who express acceptable attitudes toward persons living with HIV	Goals to be defined in relation to base study available in December 2006
		Reduced stigma and discrimination in the community	% of persons living with HIV who report having felt stigma	Goals to be defined in relation to base study available in December 2006
Source: World Bank				

4.5.2.2. Global Fund Grant

This subsidy, which amounts to a total of US\$48.5 million, was approved in the second round. It was signed in May 2004 and execution began in June 2004. The first phase US\$14.7 million ended on 30 November 2006, and filing of the budget execution report on that phase led to approval of the second phase, for US\$33.7 million, which is due to end on 31 May 2009. As of 30 March 2007, the Fund had disbursed slightly more than

US\$6.0 million (from the second phase). The remaining amount to be disbursed by 2009 is US\$27.7 million.⁴⁵

Although the proposal was for the improvement of health services, the resources were approved for the purpose of increasing ARV coverage, as indicated in the summary: *the proposal seeks to strengthen HIV services throughout the country, with special emphasis on vulnerable groups such as female sex workers, men who have sex with men, and migrant populations. The proposal seeks to increase ARV treatment from 200 persons [the level at the time the proposal was approved] to 6,000 in the fifth year. The country has a good health services infrastructure with good primary care structures in rural areas. There is extensive collaboration between the Government and NGOs in the delivery of services.*⁴⁶

The care model has been discussed elsewhere in this report, and reference has been made to the challenges posed by the vertical management model that has been used in addressing the HIV problem. With regard to effectiveness, although this project has reached its goal to increase the number of persons being treated for ARV, it should be noted that the increase has been achieved through joint use of resources from both this grant and the World Bank loan, since changes in the Loan Agreement (2006) made it possible to finance the purchase of ARVs.

Like the World Bank loan, the resources from the Global Fund are allocated according to the objectives of the grant. Table 17 shows expenditure by objective for 2006. This grant also has a component designed to cover the cost of project management, which is estimated at around 10% of total expenditure.

OBJECTIVES	2004	2005	2006	TOTAL
I.1 Improve human rights policies and environment	0	459,412	1,365,587	1,824,999
I.2 Increase access to and use of services	147,673	1,073,207	4,233,990	5,454,870
I.3 Increase access to treatment	0	2,313,462	2,194,927	4,508,389
I.4 Project management	51,443	409,096	879,378	1,339,917
I.5 Technical assistance	0	38,224	37,310	75,534
TOTAL	199,116	4,293,401	8,711,192	13,203,709

Source: SESPAS

⁴⁵ http://www.theglobalfund.org/en/funds_raised/reports/

⁴⁶ See summary of the proposal at <http://www.theglobalfund.org/programs/countrysite>

4.5.3. Comments on Expenditure Items Executed by COPRESIDA

Since COPRESIDA is in charge of managing external funds from both the Global Fund and the World Bank, this section will present a joint analysis of expenditure breakdown and resource execution for the two sources. COPRESIDA staff have indicated that the agency does not actually execute funds but rather channels them to other public and private institutions. This perception is troubling, because it implies not taking responsibility for the decision to allocate resources to the institutions.

4.5.3.1. Administration/Management Costs

As noted above, the expenditure cited for project administration/management appears high compared with standard project rates. Although this figure is probably justified by the specific characteristics of the project, it would be necessary to look at the items included under this heading in greater detail. In any case, this category includes both current and capital (fixed asset) expenditures. The current expenditures include training, per diem, travel, salaries, legal costs, and consultants (representing 57.1% of the Global Fund spending on “project management” and 47.4% of the World Bank spending on “project administration cost”). The fixed assets include construction and repairs, furniture and equipment, and repairs and maintenance, among others.

4.5.3.2. Expenditure on Qualifying and Equipping the Comprehensive Care Units

This expenditure is presented using different descriptors for the items and sub-items. Thus, to avoid any inaccuracies, the decision was made not to present an estimated total for the financial period. COPRESIDA reported that the allocation of funds for equipping the comprehensive care units (CCUs) and getting them qualified to meet the standards was based on a list provided by DIGECITSS. This list has not been subjected to a second technical review. The DIGECITSS decision process for creating new CCUs is based on the availability of space in the network of public health care establishments and on the willingness of the respective authorities to transfer these spaces. There is no systematic analysis that takes into account geographical factors, location of the population, epidemiological variables, or circumstances within the network. Nor is the equipment standardized. DIGECITSS coordinates for process of setting up the units. Coordination for the qualification process is up to DIGECITSS, not the SESPAS Certification Unit.

4.5.3.3. Expenditure on Drugs

Between 2003 and 2006, total spending on drugs amounted to US\$ 8,050,690. Table 18 shows expenditure on drugs by sources of financing for the period 2003-2006.

	2003	2004	2005	2006	TOTAL
Global Fund	--	147,673	2,196,764	2,805,018	5,149,455
World Bank	26,897	289,374	67,892	1,929,735	2,313,898
World Bank (counterpart)	2,103	15,936	8,346	131	26,516
Subtotal	29,000	452,983	2,273,002	4,734,884	7,499,869
DIGECITSS	NA	NA	NA	560,821	560,821
Total	29,000	452,983	2,273,002	5,295,705	8,050,690

NA: Not available.
Sources: SESPAS and DIGECITSS

As it can be seen, spending on drugs represents a sizable share of total expenditure on HIV (28% in 2006), and the amount has been rising substantially over the years, in tandem with the increasing availability of resources.

Although information is not available on DIGECITSS expenditure on drugs for 2006, it can be estimated that this amount represented approximately 10% of total expenditure on drugs that year. The remaining 90% corresponds to the Global Fund grant and the World Bank loan.

With the prepackaged treatment kits for STIs, most of the expenditure in 2006 was executed by DIGECITSS (70%). Table 19 shows the breakdown for drug spending in 2006.

Drug	Expenditure
ARV(1)	4,147,268
Prepackaged treatment kits for STIs	658,290
TB-DOTS	655
Opportunistic infections	236,397
Drugs and nutritional supplements for women with HIV under PNTV	241,891
Other related expenditures	11,207
TOTAL	5,295,708

(1) Includes US\$ 828,455 under the heading of "HIV+ women under PNTV" and US\$ 82,580 of expenditure executed by DIGECITSS.
Sources: SESPAS and DIGECITSS

As shown, the expenditure on ARVs represents 78.3% of the total expenditure on HIV drugs. Considering that this expenditure of US\$ 4,147,268 reaches 5,001 patients, it may be concluded that in 2006 the country spent a total of US\$829.29 per patient on ARVs.

In the following paragraphs this expenditure is compared with the expected cost based on distributing patients according to treatment lines and purchase prices for ARV drugs in 2006.

An estimate was made of the expected cost of the main first- and second-line treatment regimens for adult and pediatric patients based on 2006 average purchase prices and the percentage distribution of patients being treated with the two lines of treatment. This estimate is shown in Table 20.

Annex 3 presents tables with estimated costs for adults and children.

Table 20. Estimated cost of treating patients, 2006 (US\$)			
Regimen	Patients	Average patient cost per regimen	Total cost
Adults			
First line (88%)	4069	261.00	1,062,009.00
Second line (12%)	555	1,928.00	1,070,040.00
Total	4624	461.00	2,132,049.00
Children			
First line (80%)	302	278.08	83,979.61
Second line (20%)	75	1,707.26	128,044.50
Total	377	562.40	212,024.11
Grand total	5001	468.72	2,344,073.11
Source: PAHO/WHO			

If the total of US\$ 2,344,073 in Table 20 is subtracted from the total of US\$ 4,147,268 spent on ARVs in 2006, there is a difference of US\$ 1,803,195. This excess expenditure was not discussed during the evaluation. The figure may in fact be underestimated because the maximum number of patients was used for each of the three sets of information. A variable that might account for the difference, at least in part, would be the value of inventories, a subject that was discussed in the section on drug management.

A comparison of the average cost per patient in Table 20 (US\$ 468.72) with the real expenditure per patient (US\$ 829.29) shows a difference of US\$ 439.43 per patient.

Looking at the high proportion of spending on ARVs relative to total expenditure on HIV drugs, and the number of patients currently in treatment that the country will have to assume full financial responsibility for in the near future, there is a clear urgent need to review these expenditures, the number of patients, and the inventories on hand in order to be able to take actions that will make it possible to rationalize spending on ARVs.

4.5.3.4. Expenditure on Personnel

The salary levels paid by COPRESIDA is a subject that deserves some attention, since, first, it is relatively high in proportion to the total expenditure, and, second, there are per-worker salary levels that introduce a distortion factor into the assignment of human resources and reinforce the vertical health care system. This occurs in the areas of coordination and service delivery. There is a practice of paying a bonus to SESPAS personnel who are assigned to the comprehensive care units (CCUs), with the result that employees with similar educational background and expertise are receiving substantially different salaries.

4.5.4. Identification of Target Groups

The evaluation team has noticed that the type of targeting that is being done does not respond to the current characteristics of the epidemic, which is becoming feminized, particularly among adolescents. It is also troubling that in the Global Fund document the list of vulnerable groups fails to include “men that have sex with men” and “sex workers” who have not declared themselves as such.

4.6. Human Resources

The National Strategic Agenda for Health Sector Reform points out the fundamental need to strengthen the performance and managerial capacity of health human resources (HHR). Accordingly, its objectives call for developing policies, strategies, and national regulations that will help to guarantee effectiveness and quality in the performance of health workers. It is expected that these strategies and actions will yield the following results⁴⁷:

- Implementation of a planning system for health human resources.
- Definition of professional categories and classification of jobs.
- Definition and use of basic indicators, with up-to-date information on human resource trends – a comprehensive HHR information system
- Implementation of a career in health and regulation of human resources management
- Updating the SESPAS human resource registries in the regional health service delivery networks
- Reorganization, assignment, and distribution of SESPAS health workers based on rational criteria and geographical equity, depending on the care model
- Definition of supply and demand for professionals, technicians, and auxiliaries in the care model
- A merit-based system of recruitment, selection, employment, and job security
- Evaluation of performance and results-based incentives
- A training plan with content and methodology designed to guarantee the development of human resources at the central, regional, and local levels
- Regulation and accreditation of schools and programs. Certification methodologies for the various professions

Interviews with key informants revealed that the management of human resources to support the National Health System’s response to HIV has not been in keeping with the strategic framework described above.

⁴⁷ Oreste, Adelaida; Zapata, Selma: Elementos relevantes para la elaboración del perfil de país en materia de recursos humanos, Republica Dominicana, 2006.

Both COPRESIDA and DIGECITSS have committed, specialized technical personnel who have developed skills related not only to their job of regulating and coordinating these agencies but also to the planning, organization, and delivery of health care services specifically for HIV, PNRTV, and STIs.

At the level of services, SESPAS has assigned personnel to work exclusively on the comprehensive care of persons living with HIV in the CCUs. The evaluation has identified the following challenges in this area:

- The use of specific project-based contracting and benefits systems that distort the standards that have been set for SESPAS personnel
- A high concentration of personnel at the central level, specifically in COPRESIDA and DIGECITSS
- A considerable salary difference between COPRESIDA and SESPAS
- Extra compensation for CCU personnel
- The creation of positions outside the existing list of occupational categories – e.g., peer counselors
- Direct contracting, management, and supervision of service delivery personnel by COPRESIDA, without clear links to the services network – e.g., health promoters for the *bateyes* project

It will be a major challenge for COPRESIDA and SESPAS to retain skilled personnel once the current projects come to an end. In the short term, they could be used to support the processes of strengthening the services network and decentralization. Without any change in the existing terms of their contracts, these people could be temporarily assigned to some of the agencies that need to be strengthened – specifically, the Undersecretariat of Individual Care, the DRSSs, and some of the DPSs.

4.7. Strategic Information, Surveillance, and Monitoring of HIV and Other STIs

Strategic information is defined as the set of essential data that make it possible to monitor the clinical course of the HIV epidemic, as well as the impact of interventions, in order to make decisions that might improve the national response. In the context of the National Health System's response, strategic information includes data related to epidemiological information on HIV and its risk factors; surveillance of behavior, prevention, and treatment of STIs; monitoring and assessment of programs for the prevention of mother-to-child transmission and the comprehensive care of patients infected with HIV or in need of ARV treatment (patients with AIDS); and possibly other health sector activities.

The National Health System's long-term plans include the development of a modular management and epidemiological surveillance information system. In terms of the Health System's response to HIV, the information system should guarantee the production of information on activities and services, as well as ensure epidemiological surveillance of the epidemic in its various stages and components.

This area includes epidemiological surveillance systems, as well as systems for monitoring and evaluating the response to HIV.

4.8. Epidemiological Surveillance of HIV and Other STIs

A recent review of the HIV/STI epidemiological surveillance system (SESPAS, USAID, CDCYGAP, Oct. 2006) reports the following observations:

Weaknesses:

- Results from investigation of contacts are not systematically incorporated into the epidemiological surveillance system;
- There has been no ethno-anthropological investigation of high-risk groups not usually studied (prisoners, intravenous drug users);
- There are no plans to conduct surveys of biological behavior markers in high-risk groups;
- Some predictive markers of behavior have been identified, but they are not exhaustive;
- The reporting system is not standardized;
- There are delays of as much as a month or more in submission of “paperwork”; both analysis and communication are limited;
- Data entry is centralized;
- The epidemiologists have other duties;
- There is no systematic supervision of in-service training;
- There are no epidemiological surveillance plans;
- The private sector does not report cases.

With regard to the surveillance of STIs, although syphilis and hepatitis have been part of the sentinel surveillance system in the Dominican Republic since 2004, available data on STIs outside these surveys are very limited except in specialized centers such as the Dermatological Institute; the HIV test is not given routinely to patients with STIs; surveillance of STIs is not fully incorporated into the epidemiological surveillance of HIV in the second-generation context; there are no records showing the proportion of persons diagnosed with STIs who have been tested for HIV; and epidemiological analysis of STIs is limited.

While no surveillance or monitoring studies have been done on resistance to ARVs, contacts have been made and plans are under way to develop protocols for this purpose. There was a WHO mission on this subject in 2006. Most of the persons surveyed said that country’s surveillance resources are insufficient and participation in the system is minor.

4.9. Information Systems for the Monitoring of Programs and Services

The evaluation field visits yielded the following information:

Management information systems. A national system for the management of epidemiological information has been established for major diseases. At the national level, the system has sufficient trained staff and computers, plus an integrated database that automatically processes the data reported. However, the capacity to analyze data and feed back information is limited. At the regional and local levels the system is poorly equipped and has no mechanisms for controlling data quality.

Monitoring and evaluation (M&E). Currently there is no M&E system for HIV at the national level, nor is there a strategic plan to develop one. An M&E system has been established at the local level and has a standardized set of indicators, but they have not been updated since 1993.

There is a shortage of clinically and epidemiologically trained staff to monitor ARV therapy and STIs. Clinical personnel in the comprehensive care units have limited skills in data analysis. Activities are not been undertaken in the provinces and municipalities to monitor and improve data quality. Also, the limited capacity to make use of the information was recognized as a serious weakness.

The existing indicators only show how activities are being carried out; there are no indicators of outcomes or results.

The DRSs have an information system, but it is not very accessible at the territorial level. While 30% of it is devoted to perinatal information, PNTRV, comprehensive HIV care, STIs, and prevention of sexual transmission of HIV and other STIs, the system is stronger in the areas of epidemiological surveillance and risk factors for STIs, prevention of sexual transmission of HIV, and the prevention of blood transmission (60%).

At the level of the DRSs, information is analyzed and used for decision-making in their territories: the majority (66%) receives and submits reports on the epidemiological situation of HIV and STIs, and they analyze the information and pass it up to higher levels. This information is considered useful for decision-making on programs and management. A small proportion of the DRSs (30%) report having received feedback from higher levels or can cite a case in which a decision has been made on the basis of information submitted from their territory.

The situation is similar with the DPSs: 75% of them receive reports but fail to pass the information on to the appropriate levels. The DPSs consider that these reports are useful: they analyze them and can cite cases in which decisions were made on the basis of the information received. Some of the DPSs (for example, Region IV) report that they have not yet developed an information system, and 30% only receive feedback from data processed at higher levels (submitted directly by CCUs, PNRTV services). Their

limitations are due to logistic hurdles that prevent them from performing these functions. In the case of the TB control program, there is no regular feedback system.

There are eight information systems corresponding to territorial jurisdictions of the DPSs, but only half of them produce reports.

For the majority of the DRSs and the DPSs (60%), information systems are not integrated throughout their jurisdictions. Although the DPSs have a computerized information system, there are frequent logistical problems and there is no information network. Information analysis is very limited, especially with regard to risk factors. The information is not used as input for the development of provincial plans, if there are any.

The surveys and field visits to establishments (hospitals and UNAPs) identified the situations described below.

4.9.1. Hospitals

Information systems are independent; the different levels are fragmented; and in general they are limited in terms of the data they collect, especially in hospital services. The information that is gathered is seldom used to improve services.

The weakest information systems are those that cover comprehensive STI care, surveillance of risk factors for HIV/STI, prevention of sexual transmission of HIV and other diseases, and production of services.

Most of the respondents (67%) considered the information generated by the information/surveillance system to be useful for program and management decision-making. However, only 43% submit reports on the epidemiological situation, and 61% analyze the information. A minority (39%) receive feedback from data processed at higher levels.

Only half of establishments have a patient registry and guarantee treatment continuity; the same proportion carries out evaluation and monitoring of this program in the hospital.

4.9.2. Primary Care Units

Nearly half the UNAPs (46%) analyze and use information for decision-making in their centers, but almost all of them (90%) fail to receive reports on the epidemiological situation or feedback from the data processed.

There is need for clarity regarding the respective roles of the DPSs and DRSs in monitoring and evaluation information systems. Also, neither the flow of information from the periphery to the central level nor the feedback loops are very well defined. As a result, systems at the local levels (health establishments), communities, populations, and vulnerable groups are either fragmented or constrained (e.g., they may operate independently, in parallel, and/or with little coordination).

With the existing human resources capacity at the provincial and regional levels, good knowledge of the epidemiological characteristics of the national population in general and the vulnerable population in particular should be a standard requirement. The ability to analyze and use data as a basis for taking action at the local, regional, and provincial levels is essential in order to improve programs locally.

With regard to the information systems' processes and infrastructure, the following conditions have been underlined: many municipal hospitals have no computers, Internet, or proper equipment; there are major weaknesses in data entry and processing at the provincial and municipal levels; there is little quality control of the data; no information is available electronically or in cumulative form; supervision is very limited at the provincial and municipal levels; there are few training programs in data management; no regular meetings are held; and there is no plan for analysis of the data (Secretariat of Public Health and Social Welfare, USAID, CDCYGAP, October 2006).

4.10. Monitoring of Patients Receiving ARV Drugs

The system for monitoring HAART is working. Although it has some limitations, they can be corrected because the system has the necessary flexibility. There is need for more regular coordination with the TB control program to allow for patient follow-up and cohort analysis, at least as a first step in centers that have a large volume of patients.

4.11. Monitoring the Prevention of Mother-to-Child Transmission (PMTCT)

The monitoring of mother-to-child transmission is discussed elsewhere. The evaluation team has concluded that the system is sufficiently far-reaching in its coverage, but there is room for improvement in capturing the patients that are lost.

4.12. Monitoring of Promotion and Prevention Interventions

There are indicators for monitoring the various promotion and prevention interventions, and the results are reported to global systems such as UNGASS. There is no monitoring system for interventions to prevent transmission among intravenous drug users.

4.13. Monitoring of HIV/TB Coinfection

The information and surveillance system for TB/HIV coinfection operates through the reporting apparatus of the National Tuberculosis Program. The situation and its trends are analyzed every year at the provincial level and serve as the basis for planning the TB program. This information should be used and discussed at the provincial level and then passed on for aggregation at the national level.

In conclusion, DIGECITTS should transform the monitoring and evaluation system into a decentralized strategic information system.

5. Recommendations

5.1. Strengthening of the Services network to Provide Comprehensive Care for Persons Living with HIV

5.1.1. *Increase the early capture of persons with HIV*

Prepare an emergency plan of operation for rapid and effective access to free HIV testing with referral, to be offered by health care providers for patients with STIs and TB as well as pregnant women. Carry out a national “Know Your Status” campaign aimed at young people and women of childbearing age, with emphasis on pregnant women.

5.1.2. *Accelerate PNRTV coverage: apply the zero tolerance principle (i.e., no child of a mother with HIV shall be discharged from a hospital without having received the benefit of PNRTV)*

Redirect available human and financial resources to the PNRTV for the strengthening of maternal health care and the application of existing protocols in all public establishments.

5.1.3. *Implement an action plan to strengthen the public health service delivery network to provide HIV treatment and prevention within the ongoing context of sectoral reform and separation of functions*

Incorporate comprehensive HIV care into the DRS planning and management processes, including the reallocation of human and financial resources to enable the DRSs to fully assume this responsibility.

Reorganize each Regional Directorate so that it is specialized and in a position to deliver services with quality and efficiency, decentralize responsibilities progressively to the point of autonomy, and develop local programming processes for managing the prevention and treatment of HIV, including supplies, laboratory networks, and blood banks.

Organize the public health service delivery networks (PPRSS) based on the Regulations (service delivery and separation of functions) and the autonomy ensured under Law 87-01. Define their response capacity, strengthen their internal networks (micronetworks), and develop their information, purchasing, financial, and health management systems with a view to progressively and steadily improve the quality of care. Extend primary health care coverage by strengthening the first level and providing competent primary care units that have been equipped and given the authority to become an “intelligent point of entry” to the system.

Carry out planning, monitoring, and joint evaluation activities with the DRSs, DPSs, and respective undersecretariats within the context of 2007-2008 Plan of Action. These plans would have to be reviewed by the different agencies to incorporate specific goals and activities in light of the 2007-2008 Emergency Plan. The fact that activities of this kind

have already been initiated would indicate that this recommendation is in the process of being implemented.

5.1.4. Increase social participation and social mobilization with respect to service delivery and social oversight

The integration and decentralization of the actions for the treatment and prevention of HIV and other STIs in the health services network should be accompanied by the development of clear mechanisms for articulating services with community and civil society organizations, such that wherever comprehensive HIV care is being provided, measures are being taken to encourage community mobilization, promotion of services, and social oversight. In order for this to happen, it will be fundamental to strengthen primary care units and coordinate actions taken in the community by NGOs and other organizations within the services network.

5.2. Redefinition and Expansion of Prevention and Health Promotion Strategies

5.2.1. Revise the strategies and technical content of disease prevention and health promotion interventions based on evidence and criteria of cost-effectiveness and administrative and financial sustainability

It is urgent to direct effective promotion and prevention measures toward populations in which preadolescents, adolescents, and young adults are exposed to multiple risks, including HIV. The “vulnerable groups” paradigm needs to be shifted to a comprehensive gender approach that involves organization of communities. It is essential to enlist key stakeholders who can transform risk scenarios into scenarios that protect the human rights of these individuals and thereby reduce the incidence of HIV, and, most important, create the conditions for healthy, integrated human development.

5.2.2. Take the necessary steps to eliminate existing agreements between health care facilities and religious or any other organizations that limit the ability to promote and implement family planning programs and the use of condoms

The existence of such agreements is indicative that certain taboos and beliefs have been incorporated into public health policies. Correcting this situation will require urgent review and immediate action to prevent women in the Dominican Republic from being denied their sexual and reproductive health rights.

5.2.3. Set coverage goals for 2007-2008 and define an operational strategy to achieve these goals, specifying time frames and resources

5.2.4. Strengthen UNAPs for the promotion of sexual health and the prevention of HIV/STI

5.2.5. Increase social participation and mobilization for promotion and prevention

5.3. Review of Insurance Policies and Funding for Universal Access

5.3.1. Develop an action plan that guarantees insurance and sustainability for the treatment and prevention of HIV, full integration of insurance into universal access to prevention, and treatment based on criteria of cost-effectiveness and sustainability, as explicitly called for in the policy and processes of health sector reform currently under way

5.3.2. Improve the quality of expenditure: review project action plans and adjust investment based on criteria of cost-effectiveness and sustainability

- Improve the joint planning efforts being carried out between the agency that manages the financial resources (COPRESIDA), the entity responsible for technical regulation (SESPAS/DIGECITSS), and the establishments and units responsible for the delivery of care.
- Review the action plans approved by the World Bank for 2007 (US\$ 9.5 million) and the Global Fund for the second phase, 2007-2009, with the purpose of making any necessary adjustments to achieve consistency between priorities, the courses of action defined in the Emergency Plan of Operation, and the investment to be made in the next year. Establish contact with the financing agencies to discuss and/or negotiate any changes in the program that may be required.

5.4. Strengthening of Leadership, Administration and Management

5.4.1. Strengthening of National Health System Functions for the Progressive Transfer of Roles and Functions pursuant to the Reform Process and according to Local Realities

5.4.2. Strengthen the steering role of SESPAS in managing the National Health System response

- Use the results of this evaluation to strengthen current strategic planning processes (PLANDES and PEN) and operational planning under way (projects in progress and those being developed).
- Develop an action plan for the “return” of functions to the appropriate entities within the context of health sector reform.
- Develop the PEN, adapt the strategic planning process, and manage the national response based on recently introduced reforms (with COPRESIDA directly under SESPAS).

- Harmonize the SESPAS planning process with that of COPRESIDA in terms of national and territorial goals, as well as those for establishments, with consequent plans and allocation of resources.

5.4.3. Take immediate measures to harmonize the reform processes under way and the HIV/STI care model based on criteria of cost-effectiveness and sustainability

- Channel human and financial HIV resources toward improving the quality of maternal and child care and the effectiveness of the PNRTV.
- Postpone replication of the model introduced at La Altagracia Maternity – which calls for the development of care units for pregnant woman with HIV within regular maternal health care services – until a technical and economic evaluation of the initiative can be undertaken, with the results of this evaluation to guide decision-making about the desirability of replicating this model in the Dominican Republic.
- Suspend the creation of new CCUs in their current form and develop a plan for integrating them into the network.
- Articulate the existing CCUs with the different levels of the services network, with clear mechanisms for referral and counter-referral. Use the infrastructure and human resources available in the CCUs to facilitate this process and strengthen the services network’s capacity to provide comprehensive care for HIV.
- Implement a zero tolerance policy with regard to stigma and discrimination in health facilities. Provide training for health workers throughout the services network, with emphasis on primary care, maternal and child health care services, and services for high-risk patients (those with TB and STIs). It is recommended to use the IAMI methodology (integrated management of adolescent and adult illness, adapted to the needs of the region) to support this process.
- Develop sensitization and education strategies to counteract the false perception that HIV in the Dominican Republic is an “imported” problem introduced by the migrant population and help the public understand the role played by population movements in the transmission of HIV, both internally and away from and into the country. It is necessary to consolidate the processes under way for the development of a binational strategy that will make it possible to optimize existing resources and guarantee access to prevention, care, and treatment services for the migrant population on the island of Hispaniola. A situation analysis as it affects the island as a whole is fundamental to the advancement of this binational process.

5.4.4. Strengthen regulatory, auditing, and oversight capacity for exercise of the leadership role at the national and territorial level

- Consider the desirability of conducting audits in the units experiencing the largest losses, with the idea of developing specific actions to quickly close some of the most easily preventable gaps.

5.5. Drugs and Supplies

5.5.1. Have SESPAS, working with COPPFAN, examine the feasibility of PROMESE/CAL taking over the management of drugs from DIGECITSS in the medium term. Once the new management structure has been defined, develop an action plan for the transfer of functions

5.5.2. Take immediate steps to improve supply planning and management

- Conduct an immediate review of supplies on hand and procurements made in 2007 to determine whether any adjustments in the plan are needed for the second half of 2007.
- Prepare a combined supply plan for 2008 that covers all drugs and medical supplies needed to provide comprehensive care for persons living with HIV and support the PNRTV, with the responsibilities of participating institutions clearly defined at the various levels of management.
- Introduce a method for quantifying needs at all levels involved in the estimation process.
- Conduct an immediate review of the data available on the number of patients and breakdown by treatment regimens, and strengthen the information system so that it will capture data on the length of time patients remain on the drug regimens and the reasons why the regimens are changed.
- COPRESIDA should develop a short-term plan to cover the transition from the Clinton Foundation purchasing arrangement to an international procurement agent in order to avoid any interruptions in the supply of drugs.

5.5.3. Strengthen drug regulation and quality assurance

- Establish an abbreviated procedure for the registry of drugs of public health interest, with emphasis on ARV drugs
- Strengthen the monitoring and control of drugs throughout the supply chain
- Strengthen the National Public Health Laboratory so that it has the capacity to analyze the quality of ARV drugs that enter the country

5.5.4. Take steps to minimize the impact of intellectual property agreements, especially the CAFTA agreement, on access to drugs for the treatment of HIV, STIs, and opportunistic infections

- Formulate a public policy on ARV drugs that guarantees a supply of high-quality generic ARV drugs for the affected population.
- In the case of drugs, urge the Office of Industrial Property to define stricter criteria for patentability in order to reduce the routine granting of patents, and, at the same time, ask for the development of effective criteria to apply in the case of attempts to patent “new molecules.”
- SESPAS should establish public health priorities for access to drugs, which should be taken into account in the evaluation of patents.

5.5.5. Implement a generic drug strategy with the goal of increasing competition, lowering prices, and ensuring treatment sustainability

5.5.6. Develop a plan for promoting the rational use of ARVs and drugs for STIs and opportunistic infections, to include implementation of a national drug surveillance program and regular monitoring of treatment compliance through comprehensive patient care

5.6. Strategic Information to Support Management and Decision-making (Surveillance, Monitoring and Evaluation, and Information Systems)

5.6.1. Strengthen monitoring and evaluation mechanisms so that information will be used in management and decision-making

Include the analysis of gaps and missed opportunities and cost-effectiveness studies as essential aspects of monitoring interventions. Identify a group of management indicators which will make it possible to measure progress toward the impact goals that the country has defined. Instruct personnel at all levels of the system to present their analyses with reference to existing gaps and to work toward this goal using the group of selected indicators.

5.6.2. Strengthen analysis and the use of existing information

Utilize existing information from different sources to prepare an up-to-date analysis of the national situation by regions and provinces in collaboration with the DRSs and DPSs. Priority should be given to a comprehensive analysis of the situation on the island as a whole, to serve as basic input for binational action.

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7. Annexes

Annex 1: Evaluation Team

Technical Cooperation Team

PAHO/WHO

Cristina Nogueira
Jean Phillippe Breux
José Calleja
Bilali Camara
Dalia Castillo
Amalia Del Riego
Bertha Gómez
Nelly Marín
Rafael Mazín
Ligia Pereira
Ciryil Pervilhac
Matilde Pinto
Celia Riera

UNICEF
Claudio Bets
Sara Menéndez

USAID
William Duque

National Teams

Roche Adames
Carlos Aguiar
Xiomara Aquino
Arellys Batista
Silvia Caro
Elpidio Antonio Collado
Elisabeth Conclin
William Cuello
Modesta de la Cruz
Angélica Difont
William Duque

Adrián Encarnation
Ana Delia Figueroa
Jazmín Guzmán
Noemí Lara
Osvaldo Lorenzo
Belkys Marcelino
Ángela Moreno
Juana Paulino
Tessie Adela R
Adela Ramírez
Domingo Reinoso
Altagracia Rivera
Edith Rodríguez
César Rosario
Isidora Sabala
María Santos
Fara Segura
Juana Solano
Gisela Ventura

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Annex 2. Selected Information and Assumptions Used in Estimating the Gaps

Table 21: Estimating gaps in the capture of persons with HIV, candidates for HAART, and pregnant women			
(Total estimated population, children and adults)			
Indicator	2004	2005	2006
Total estimated HIV+ population (children and adults)	69,500	69,450	66,000
Estimated number of annual deaths (children and adults)	7,381	6,451	6,533
Total estimated HIV+ demand not yet captured by the services (capture gap)	59,529	56,179	51,950
Total estimated need for antiretroviral therapy (children and adults)	11,370	11,133	14,650
Total number of persons being monitored in CCUs (children and adults)	5,041	8,261	14,050
Total number of persons receiving HAART (children and adults)	956	2,581	5,001
HAART gap (children and adults)	10,414	8,552	9,649
Adult population (15 and older)			
Prevalence in adults	1.13%	1.11%	1.12%
Estimated population with HIV	64,570	64,440	62,000
Estimated number of annual deaths from AIDS	7,010	6,080	6,100
Total estimated number of persons in need of antiretroviral treatment (17% of persons living with HIV)	10,930	10,690	14,000
Total number of persons being monitored in CCUs (adults) *	5,041	8,261	13,136
Total number of persons receiving antiretroviral drugs (adults) *	885	2,374	4,624
Total number of persons in need of HAART not receiving treatment	10,045	8,316	9376
HAART gap	92%	78%	67%
Total number of persons in need of monitoring who have not been captured by the services	59,529	56,179	48,864
Capture gap	92.2%	87.2%	78.8%
Under 15 (0-14)			
Total estimated HIV+ population (0-14)	4,930	5,010	4,000
Estimated number of annual deaths from AIDS (0-14)	371	371	433
Number of children in need of HAART	440	443	650
Number of children being monitored *			914
Number of children receiving HAART	71	207	377
Number of children in need of HAART not receiving treatment	369	236	273
HAART gap in children	83.9%	53.3%	42.0%
Number of children in need of monitoring who have not been captured by the services			3,086
Capture gap in children			77.2%

Pregnant Women			
Prevalence in pregnant women **	1.50%	2.30%	2.30%
Estimated number of pregnant women per year ***	216,583	220,224	223,363
Pregnant women tested for HIV	49,049	77,725	79,235
Estimated number of HIV+ pregnant women	3,248	5,065	5,137
HIV+ pregnant women captured by the services *	839	1,288	1,123
Estimated number of pregnant women HIV+ not identified by the services *	2,409	3,777	4,014
HIV+ pregnant women captured by the services who do not receive NVP or cesarean section *	18	86	47
Estimated number of HIV+ pregnant women who do not receive NVP or cesarean section (no protection).	2,427	3,863	4,061
HIV+ pregnant women who do not receive NVP but undergo cesarean section *	22	11	24
HIV+ pregnant women who receive NVP but do not receive cesarean section *	216	193	188
HIV+ pregnant women who receive both NVP and cesarean section (complete protection of the mother) *	248	484	456
Coverage of complete protection of the mother	8%	10%	9%
Estimated gap in complete protection of pregnant women	3,000	4,581	4,681
Estimated number of children born with HIV because health services failed to capture and intervene (best scenario) *****	482	755	803
Estimated number of children born with HIV because health services failed to capture and intervene (worst scenario) *****	1,205	1,889	2,007
<p>* DIGECITSS: CCU Information System and PNRTV (2006 through October only).</p> <p>** DIGECTISS, Sentinel Surveillance: 2005 prevalence was used as an approximate figure to estimate the gaps in 2006, since the information on prevalence for 2006 was not available at the time this report was prepared.</p> <p>*** CONAPOFA: Estimates for population under 1 year.</p> <p>**** Best scenario: 15% transmission during pregnancy and childbirth plus 5% transmission during breastfeeding = 20% transmission.</p> <p>*****Worst scenario: 30% transmission during pregnancy and childbirth plus 20% transmission during breastfeeding = 50% transmission.</p> <p>Note: Without treatment, 15% -30% of children born to HIV+ mothers will be infected during pregnancy and childbirth. In addition, 5% - 20% will be infected during breastfeeding.</p> <p>Source: WHO/UNAIDS estimates.</p>			

Annex 3. Projected Treatment Costs

Table 22. Expected costs of adult treatment regimens: Dominican Republic, 2006 ⁽¹⁾ (in US\$)				
Regimen	Expected cost per regimen (a)	Number of adult patients (b)	Total cost per regimen	Average cost per line
First line				
AZT+3TC+EFV	400.00	750	300,000.00	
AZT+3TC+NVP	215.00	2061	443,115.00	
D4T+3TC+NVP	156.00	440	68,640.00	
D4T+3TC+EFV	349.00	385	134,365.00	
Total first line		3636	946,120.00	261.00
Second line				
AZT+3TC+IDV/rtv	1,234.00	105	129,570.00	
AZT+3TC+LPV/rtv	2,603.00	85	221,255.00	
D4T+ · 3tc+lpv/rtv	2,544.00	25	63,600.00	
Total second line		215	414,425.00	1,928.00
<p>(1) Estimated cost of treatment regimen based on purchase price range and shipping costs in 2006.</p> <p>Sources: Clinton Foundation (a) and DIGECITSS (b)</p>				

Table 23. Expected costs of pediatric treatment regimens: Dominican Republic, 2006 ⁽¹⁾ (US\$)

Treatment regimen	Average value (a)	Number of pediatric patients (b)	Total value	Average value	Projected number of patients	Projected value
First line						
AZT+3TC+EFV	262.80	52	13,665.60			
AZT+3TC+NVP	287.43	190	54,611.70			
D4T+3TC+NVP	189.69	16	3,035.04			
D4T+3TC+EFV	303.48	17	5,159.16			
Total		275	76,471.50	278.08	302	83,979.61
Second line (3)						
AZT+3TC+LPV/rtv	1,748.90					
D4T+ · 3tc+lpv/rtv	1,665.62					
Environment				1,707.26	75	128,044.50
Grand total						212,024.11

(1) Estimated cost of treatment scheme based on purchase price range and shipping costs in 2006. An average value was used because the purchase prices varied during the year.

Sources: Clinton Foundation (a) and COPRESIDA (b)