

**Republic of  
Suriname**

**Support for Health  
Sector Reform**

Amended Final Report  
Study #1

**National Health  
Accounts**

*Submitted to:*

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Amended  
*June 15, 2002*

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## **Acknowledgements**

The study team sincerely appreciates the support and leadership provided by the staff of the Project Execution Unit of the Ministry of Health. Manodj Hindori, the Director of the Unit, provided an effective mix of support and critical observations that generated considerable improvements in the study product. The staff in the PEU, Sharita Gangaram Panday and Mahender Mangroo, provided feedback, and often essential elements of data, throughout the study. They provided continual guidance and partnership that made the data gathering effort considerably more productive and the study more effective.

The team also appreciates the willingness of the Health Reform Committee to meet with the team to review components of our work, raise important issues and, often, help us understand more clearly both the data and the policy challenges. Similarly, the participants in the workshops made sure that all diverse views on the process and its products were recognized and incorporated into the learning exercise implicit in NHA development.

Of most importance, however, has been the willingness of both public and private sector organizations and individuals to provide the team with data, typically in a form not routinely generated and, in the case of the private sector, often not shared.. Although we have noted areas where data are difficult to obtain, these difficulties were rarely reflections of unwillingness. Throughout the process, public and private organizations continued to identify additional data sources and provide additional information. This bodes well for future NHA replications.

## **Note**

After the final report was delivered, the team received an additional set of important comments from an IDB reviewer. Among the comments was a general recommendation for more explicit discussion of specific aspects of the data relating to collection, analysis, access, and interpretation to provide a better starting point for the planned replication process. To the extent possible, we have tried to address these issues in this amended version of the final report. The decision to incorporate our response into an amended Final Report is based on our view that the issues are best addressed within the overall document and would be less useful if presented separately.

## **Executive Summary**

### **Study Background and Purpose**

In November 1998, the Government of the Republic of Suriname and the Inter-American Development Bank with support from the Japanese Special Fund, entered into a technical cooperation agreement to carry out nine technical studies on the health sector in order to generate needed information for the design of a Health Sector Reform Initiative. As one of the nine studies, the National Health Accounts (NHA) Study had the overall purpose of ascertaining total health expenditures in Suriname for the year 2000 and evaluating their sources and uses. A secondary purpose was to identify existing data limitations and make recommendations for institutionalization and replication of the NHA to permit analysis of changes in response to policy changes.

The NHA Study followed the Berman and Cooper methodology, which divides the health economy into sources of funds, financing intermediaries, and uses (providers and functions) in order to generate a set of descriptive tables showing the totality of expenditure flows in both the government and non-government sectors.

### **Work Carried Out by the Study Team**

The Study was carried out between June and November 2001 by Management Sciences for Health (MSH) and Health Care Organizers and Advisors (HECORA). The Study Team involved the Health Sector Reform Steering Committee and other key stakeholders in the identification of key policy questions and concerns, and maintained close communication with the Ministry of Health's Project Executing Unit (MOH/PEU) throughout the Study.

Public sector data were collected from records provided by concerned Government institutions, especially Ministry of Health, State Health Insurance Fund (SZF), and Ministry of Social Affairs. Due to a lack of centralized information on firms, a survey was conducted using a purposeful sample of employers and firms. Household expenditures on health were taken from the household health expenditure survey (Study 0) of the Health Sector Reform Program. Data were entered into the specialized NHA software, then output to spreadsheets for further analysis. Policy findings and implications for replication were presented during a two-part dissemination workshop.

### **Issues Faced in Data Collection and Analysis**

As would be expected in a first implementation of NHA, identifying all the financial flows in the national health system proved difficult. In general, the NHA required information not systematically collected by institutions in the normal course of operations. More specifically, the following issues posed challenges to getting a precise picture of financial flows: inconsistency of data from various sources; delays in the official annual reconciliation of expenditures; lack of reliable information on firms'

expenditures on health; lack of time and resources to develop disaggregated information which would allow determining the use of funds supplied to institutions; ad hoc payments made to institutions in response to budgetary problems; and lack of agreement on basic financial indicators such as GDP. While the Study Team made informed decisions to resolve these issues, they should be reviewed during the replication of the NHA. Some of these issues relate to larger public finance and administration practices in Suriname and so may be less amenable to modification.

### **What do the National Health Accounts Tell Us?**

During 2000, Suriname spent Sf 105,464.7 million, or USD 78,763,778 on healthcare, an average of Sf 241,456.20 per resident. In dollar terms, health expenditures were USD 180.33 per capita, or 9.42% of GDP. This level of expenditure considerably exceeds the 6-8% Government target. While comparison with other countries in the region must be made cautiously, Suriname spends a relatively high percentage of GDP on health, although Government's share of expenditures was not relatively high.

Public funds accounted for over 43% of expenditures. Approximately one-third of Government funds are payments to SZF on behalf of Government employees, although analysis of SZF financial issues must be done carefully. External sources, including the Dutch Treaty (RLA), provided over 14% of expenditures. RLA itself amounted to over 10% of all health expenditures. In per capita terms, the Surinamese population spent out-of-pocket an average of USD 36.11, of which \$9.97 was for household contribution for insurance premiums and the rest for direct services.

In use of funds, the largest provider category of expenditures was for hospitals, which overall represented more than 36% of all health expenditures, with public sources spending a higher percentage (45%) of their total expenditures on hospitals compared with private sources (37%). Spending on primary care and preventive services accounted for just over one-third of all funds, although further separating these two functions is difficult since many providers generate both primary care and preventive care and appropriate data were not available. While the NHA framework allows the allocation of funds to functions, data and resources available for the Study did not permit this.

### **Recommendations for replication**

The Study produced the initial NHA estimates in Suriname within a very limited timeframe. The results were therefore rough and elementary; in future replication, the following is recommended:

1. To measure change over time and to gauge the impact of policy changes, NHA analysis should be replicated every two years.
2. The NHA should be organized and managed out of the MOH/PEU.

3. A small core team of experts seconded on a part-time basis from their home institutions should be responsible for actual work on the NHA, with a larger technical working group meeting periodically to review progress, resolve on-going technical issues, and perhaps performing defined analytic tasks.
4. Technical staff from a wider range of agencies should directly participate in order to encourage a broader operational awareness of the utility of NHA to their agencies.
5. To address the significant data gaps and issues, the core team should be organized quickly and begin to plan for the next round, including designing an overall strategy and operational plan for data acquisition; identifying key representatives from relevant institution; working with a small group from key institutions to develop a better sense of how health activities are distributed among functions.

## Chapter I

### Health Reform in Suriname

In November 1998, the Government of the Republic of Suriname and the Inter-American Development Bank (IDB) with support from the Japanese Special Fund, entered into a technical cooperation agreement to carry out a series of nine technical studies on the health sector, as part of a Health Sector Reform Initiative. The purpose of this initiative is to improve the efficiency, equity, quality, and financial sustainability of health care in the country. These studies, along with policy workshops and implementation activities, will generate needed information and help initiate reform in key aspects of the health care system.

The Health Sector Reform Initiative comes in response to a long period of decline in the financial and institutional support to the health sector that reflected a general period of economic and political instability. Macroeconomic problems of the period impacted directly on the health sector. The heavy reliance on the export of a few raw materials, particularly bauxite, has made Suriname quite vulnerable to the global reduction in raw materials prices which reduces both government revenues and household incomes. The large-scale devaluation of the Suriname Guilder against the US Dollar has made imported goods and services, particularly drugs, considerably more expensive. The period of rapid inflation made it difficult to develop realistic budgets as well as to project revenues and financial requirements. As a result, contemporary budget processes continue to provide few opportunities to improve the allocation and management of health sector funds.

The Pan American Health Organization publication, Health in the Americas, described the Suriname health sector from the mid-1980s through 1992 as being “affected by a shrinking financial base, lack of investments in and maintenance of facilities and equipment, scarcities of drugs and reagents, and the departure of trained public health professionals.” The report also noted the problem of inadequate information for effective planning or monitoring of system performance reflecting both the lack of integration of existing systems and the lack of analysis of the data that do exist.

Demand for services, however, has not lessened. Formal public programs are in place to support the provision of a wide range of services for the poor and civil servants. As a result, the Surinamese population has relatively high expectations for their access to health services. In addition, these programs operate independently and are characterized by significant inefficiencies, duplication of services, and weak management systems. (These attributes are well documented in the other studies being implemented as part of the Suriname-IDB Health Reform Initiative.) The scale and political importance of the populations served by these systems make it difficult to reduce or modify benefits. Additionally, each of these programs has been operating with reduced resources in real terms and, as a result, has had to focus on immediate operating requirements, compromising the potential to plan more effectively or to address priorities for more cost-effective services.

The need for health reform is widely recognized, although neither the form nor timing of needed changes has been fully defined. The policies and structures necessary for the Government to provide overall guidance and to set and support system priorities do not exist nor do existing resource allocation practices lend themselves to a true stewardship role. To address this reality, the Surinamese government formulated a Policy Paper covering the period 1997-2001 that identified two core problems in the system: inadequate financing and the lack of trained personnel. The initial emphasis was to arrest the decline in quality of care and access to services. Strategies proposed to address these problems included the establishment of a National Health Council, management improvement, privatization of public hospitals and the Regional Health Service, and improvement of health facilities in the interior of the country. The Policy Paper emphasized the need to implement effective cost controls and move away from open-ended funding for hospitals, more effective budgeting procedures, and the reduction of subsidies. It also indicated a target level of funding in the range of 6-8% of GDP.

Suriname's health system already possesses many characteristics sought after in health sector reform initiatives. It has moved from public sector direct provision of services to a system of financing services for different target populations. The State Health Insurance Fund (SZF), a social insurance for public employees, is financed by the contributions of employers and employees. The Ministry of Social Affairs distributes health cards based on household economic status which provide entitlement to services with partial or no payment to the provider, and through the Medical Missions, has contracted for primary care services for the population in the Interior. For each of these programs, the public role is in providing payments into the insurance fund or, directly to providers on behalf of the recipients of care. In many countries, it is this role that provides the opportunity to utilize coverage and payment strategies to create the incentives for more efficient and effective performance. It is clear from Study 6 that many opportunities to improve performance are potentially available within the existing structure of the sector.

While the opportunities for better allocation of resources and more effective use of public and private funds for health exist, the strategies and procedures to operationalize this capacity are not currently in place. The technical studies supported under the GOS-IDB Initiative are designed to provide the information necessary to begin the process of strengthening the management of the financing and service delivery systems and design of policies to improve the effectiveness with which resources in the health sector are utilized. The current study, which presents an initial set of National Health Accounts, maps the current flows of financial resources from public and private sources to health care providers and provides a first comprehensive look at the financial flows which characterize the current (year 2000) operations of the health sector.

This report presents the process and results of the first National Health Accounts (NHA) analysis in Suriname. The sections below present an overview of the NHA methodology, description of work carried out by the Study Team, summary of data sources, discussion of issues encountered in data acquisition and analysis, estimates of financial flows from sources to intermediaries to uses, identification of policy issues which can be addressed by the NHA, and recommendations for future replication.

## Chapter II

### National Health Accounts

#### A. Overview: What are National Health Accounts?

National Health Accounts (NHA) are a set of descriptive accounts that describe the totality of expenditure flows in both the government and non-government sectors. They describe the source of all funds utilized in the sector and the uses of those funds. Put another way, NHA simply adds up the amount of money going into the health sector and describes where it comes from and where it goes. Information from the NHA can be used to help policy makers change policies to better allocate resources and otherwise exercise their stewardship responsibilities.

The outputs from the NHA are a standard set of tables containing figures on various aspects of a nation's health expenditures. The NHA tables differ from other forms of expenditure review in the following ways:

- a rigorous classification of the types and purposes of expenditures and of the actors in the health system;
- a complete accounting of all spending for health, regardless of the origin, destination, or object of the expenditure;
- a rigorous approach to collecting, cataloging, and estimating those flows of money; and,
- a structure intended for ongoing analysis as opposed to one-time study.

Because the NHA methodology functions independently of the structure of a country's health care financing system, NHA can be used regardless of the system, and can be used to make international comparisons on spending patterns. NHA provides essential data for health sector planning and management, beginning with answering the following types of questions:

- How much money is being spent on health?
- How is the money being used?
- What percentage of benefits/resources is going to which provider and patient groups?

In addition, the process of collecting data for an NHA analysis can unearth weaknesses and inconsistencies in how a country collects and records its health and financial information.

The Berman and Cooper (2000) methodology uses the following “entities”:

- sources of funds (i.e., central government, private employers, consumers, international organizations);
- financing intermediaries which receive health funds and use them to either produce or procure services on behalf of patients; and,
- uses of funds, which can be subdivided into comparisons of different providers (e.g., hospitals, clinics, GPs and specialists), functions (e.g., primary care, preventive care, curative care, pharmaceuticals and diagnostics), and target groups (e.g., income groups, population by location).

The uses of health funds will be linked to the policy questions and issues that concern the country

The NHA methodology defines a health expenditure as an expenditure for activities whose primary purpose is health improvement during a defined period of time for a country (citizens and residents). It is the value of outlays for goods and services aimed at improving health measured in monetary terms. This definition includes a range of health-related activities such as curative services, prevention and promotion programs, health services provided abroad, training, research, and administration and overhead. On the other hand, activities such as water and sanitation and nutrition programs, while they contribute to overall health, are not considered within the boundaries of “health expenditures” and are therefore not counted by the NHA.

Because NHA focuses on the financial dimension of the health system, for many purposes these data must be combined with other relevant information, such as information on health services and goods, outputs, and outcomes, to be more useful to policy makers.<sup>1</sup>

## **B. The NHA Software**

The Berman and Cooper methodology is used by the specialized NHA software package developed by Harvard University. The software provides a logical structure to identifying the NHA entities and, in turn, in identifying the sources from which

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<sup>1</sup> Recently, significant effort has been directed at standardizing the categories and procedures for developing National Health Accounts. As examples; OECD has recently produced a detailed set of categories for organizing NHA information. PAHO and WHO have developed a set of analytic structures for NHA development, and a collaborative group from the World Bank, WHO, and OECD have been supporting the development of a Producer’s Guide based on the Berman-Cooper methodologies.

data needs to be collected. The software's tables force the flows from the various entities to be internally consistent (i.e., total flows into intermediaries must equal total flows out of sources), thereby flagging possible errors and omissions. The software also graphically presents the financial flows between the entities, which can be especially useful in the early stages of identifying those flows. The above capabilities make the software especially useful as a training tool and for introducing analysts to the NHA methodology. However, because the software's capabilities for data manipulation and analysis are limited, once the initial NHA estimates are produced users generally output them to Excel or other spreadsheet program for further analysis and presentation.

### **C. Purpose of the Initial NHA Study in Suriname**

As discussed in Chapter I, as Suriname embarks on its health sector reform, policy makers need information on the current state of the health sector. At present, Suriname does not possess an information system that provides information on levels, sources, and uses of funds, so policy analysis is very difficult. As one of the nine studies commissioned in advance of the reform, the NHA analysis was intended to identify the sources and uses of funds supporting health activities, and assess the consistency between the uses of those funds and the stated national priorities for health. The NHA is descriptive rather than judgmental, and the outputs do not necessarily indicate that one use of resources is better than another. Rather, policy makers must themselves use the quantitative outputs to address a number of policy questions, including:

1. Is the overall level of funding realistic and adequate, given the country's resources and expectations on healthcare?
2. Are the allocations of resources to the various uses consistent with stated national health priorities?
3. Are the amounts being spent on various groups supportive of equity?

Therefore, the overall goal of the Suriname NHA Study was to ascertain total health expenditures and to evaluate the sources and uses of funds in both the public and private sectors. The replication of the NHA over time would permit, in addition to greater detail, analysis of changes taking place in the sources and uses of funds in response to changes (or lack thereof) in policy.

## Chapter III

### Implementation of Initial National Health Accounts in Suriname

#### A. Schedule and work done

The Study Team was led by Management Sciences for Health (MSH), which was responsible for 1) design of the study and the application of the NHA methodology to Suriname; 2) analysis and development of policy recommendations; and, 3) overall management of the Study, including supervising the local management consulting firm, Health Care Organizers and Advisors (HECORA). Under the technical guidance of MSH, HECORA was responsible for coordinating Study activities in Suriname, including 1) facilitating data collection in both the public and private sectors; 2) establishing a system for entering, maintaining, and documenting all data; 3) providing logistical and organizational support for meetings, workshops, and visits by MSH consultants; and, 4) participating in data analysis using the NHA and other appropriate formats and providing input into developing policy findings. Key team members included: Dr. Gerry Rosenthal (MSH), Team Leader, Paul Fishstein (MSH), Deputy Team Leader, Dr. Robert Brohim (HECORA), Study Coordinator, and Peter Berman, Consultant to MSH. Dr. Logan Brenzel (MSH) participated in the start-up phase of the Study.

The Study Team maintained close communication with the Ministry of Health's Project Executing Unit (PEU), and all work on the design, data collection, and analysis phases of the Study was done in close collaboration with PEU staff. The team also maintained communication with the Health Sector Reform Steering Committee and other institutions involved in the Study. Due to the importance of engaging policy makers to encourage use of the Study's results, health sector stakeholders were engaged periodically during the Study, including the opening launch workshop and during the data collection and analysis stages. Where possible, the Study Team tried to establish linkages with the other eight studies.

The Study was implemented between June and November 2001 according to the following phases.

Phases 1 & 2:	Start-up and launch: June
Phase 3:	Data collection: June - August
Phase 4:	Data analysis and report writing: August - November
Phase 5:	Study conclusion and final policy workshop: November

Data collection continued intermittently into October, and occurred concurrently with the initial analysis and writing.

During the start-up and launch, the Study Team defined the NHA study design, developed a workplan and ongoing working relationships, and conducted a launch workshop. An inventory was conducted of secondary data which could be used for the NHA analysis, background documents were collected, and gaps in existing information were identified, chiefly expenditure information on external sources (donor organizations, NGOs, and Foundations) and on private employer expenditures (including direct payments for employees' health care, insurance payments, and costs of employer-owned health services). A strategy was developed for gathering expenditure information from the private sector.

During this phase, Health Sector Reform Steering Committee members were briefed on the Study objectives and general approach, and were asked to describe policy issues or concerns that they had regarding health expenditures in Suriname. Their responses were used in the study design and in interpretation of the results.

Meetings were also held with other key stakeholders and providers of information to brief them on the study approach and objectives, as well as to obtain information from them on their concerns and on issues related to health expenditures in Suriname.

A two-day workshop was held to launch the Study. The 30 participants included staff from a range of ministries and agencies. Day I focused on introducing the Study and NHA methodology and on eliciting policy concerns of stakeholders, while Day II focused on the more "hands-on" aspects such as use of the NHA software and identifying the initial sources, financial intermediaries, and uses for the flow of funds analysis.

The bulk of data collection from both primary and secondary sources took place between June and October. A description of the data sources is presented below under "methodology and data sources." Once collected and manipulated, data were entered into the NHA software. During the analysis and writing phase, data were cross-checked for validity and consistency, and a number of adjustments were made. Towards the completion of the data collection phase, preliminary NHA estimates were shared with a group of reviewers to ensure that the Study Team had incorporated all available information and interpreted it appropriately.

Finally, policy findings were presented during a two-part dissemination workshop for the NHA Steering Committee, the Inter-American Development Bank, and other invited officials. During the workshop, methods, findings, and policy implications of the Study were presented and discussed.

## **B. Methodology, data sources, and data issues**

The Study followed the Berman and Cooper (2000) methodology, which, as described above, requires information on the sources of funds, financing intermediaries, and uses (providers and functions) of funds. This in turn required the

collection of information from a wide range of sources in the public and private sectors.

For the public sector, the main sources were the records provided by relevant Government institutions, especially MOH, SZF, and MSA. For firms, structured information was taken from a purposeful sample of employers and firms. Annex B provides detail on the estimation of firm's expenditures. For households, the Study used data collected for the household health expenditure survey conducted as part of the Health Sector Reform Program (Study 0). Annex C provides detail on the estimation of household expenditures.

As would be expected, identifying all the financial flows in the national health system was difficult, especially because this was the first implementation of NHA. This does not reflect a lack of willingness on the part of stakeholders. Rather, NHA requires information not systematically assembled and rarely analyzed by the stakeholders themselves in the normal course of operations. The data collection process is an analytic task requiring both time and resources.

The Study has benefited greatly from the cooperation of many public and private entities. However, the time and resource limitations of the study precluded constructing the disaggregated data from the current institutional records although the raw materials for doing so are available. This is particularly true for the hospital data. Therefore, these results need to be recognized as the produce of a first effort, which may raise more questions than can be answered from the data in their current form. During data collection and analysis, a number of issues requiring resolution emerged. While the Study Team was able to make informed decisions about how to treat these issues, they should be considered during the replication of the NHA. Some of them, however, are related to larger public finance and administration practices in Suriname, so may be less amenable to modification. Some of these issues are discussed extensively in the Provider Payment Study (Study Six) and other studies.

Issues included the following:

1. General consistency of data from various sources: For many elements of data, the linkages required for NHA are not necessarily incorporated in existing information systems in Suriname. While, in principle, each institution (or "entity" in NHA terminology) "knows" what funds it receives and what is done with them, in fact, mapping the direction and magnitude of these financial flows requires a rethinking of the practices that characterize information management in both the public and private sectors. In budgeting for the public hospitals, initial budgets indicated no transfer of funds from MOF or MOH. Rather, the assumption is that hospitals will generate revenue from the payments made by SZF and MSA. By midyear, however, hospital revenues are insufficient to support continued service provision. In response, the public hospitals receive a direct lump sum payment from the Ministry of Finance, identified only as being for unanticipated expenses. These off-budget funds are used for hospital

operations and may include payments to providers for previously provided goods and services. In many cases it was difficult or impossible to tie what an institution received from funding sources with the types of providers and/or uses that these funds supported. This task was made more difficult by the fact that the institution's overall budget is not reconciled after the fiscal year is over.

2. Debt, arrears, and timely accounting: Attributing expenditures to the year in which they occur, in this case the year 2000, is basic to NHA. Even in late 2001, however, many year 2000 expenditures had not yet been finally determined. More generally, the official annual reconciliation of expenditures required in the public sector, the "Begrotingsrekening," has not been prepared for the past several years. This means that there are not yet "official" final expenditure data for many health-related activities in the public sector. This resolution is further complicated by the reality that many public financial intermediaries have not paid for services provided in prior years. As a result, the expenditures in a given year are often associated with prior years' performance. This "debt problem" was raised by many of the participants in the Launch Workshop and is a serious constraint on NHA development. With the cooperation of the public authorities, the Study Team tried to form reasonable estimates of 2000 expenditures but this issue remains an analytic challenge.
3. Capital assets and multi-year activities: In the NHA methodology, the value of capital assets is not depreciated or amortized. Therefore, all health-related expenditures made in 2000 for capital equipment, vehicles, buildings, and land were included. This included the value of all donated capital equipment as well. Since expenditures on capital assets are not expected to be smooth over a time horizon, there will be years when this value is higher or lower than other years. In many cases the true annual expenditure amounts differ considerably, since NHA counts funds in the year they are received, not when they are ultimately spent. Although the year 2000 did not reflect any major funding for capital equipment, etc., this is an issue that the replication team will need to be aware of. (Even the funds from IDB to support this Study do not show up in 2000 but rather in an earlier year when they were obligated by the donor and accepted by the country.)
4. RLA (Dutch Treaty): The Dutch Treaty (RLA) provides financial support for persons requiring urgent medical attention that cannot be obtained in Suriname. While none of these funds actually pass through Suriname, they are directed at improving the health of the Surinamese population and were included in the analysis.
5. Information on firms' expenditures: Because there was no central or consolidated source of information on firms' expenditures on health care for their employees, a separate survey was done of a wide range of firms. The process of estimating total expenditures through firms from the response to the survey is described in Annex B.

6. “Supplementary flows” to and through the MOH: At various points during the year, “supplementary” funding is provided to the MOH. This may occur when there is a general change in operating costs related to a new labor agreement and, as well, when the inadequacy of initial funding commitments becomes more apparent. In both of these cases, funds were distributed from the MOF directly to the hospitals as a lump sum. In the case of increases in payrolls, it is, in principle, easy to assign the new funds. However, the mid year lump sum increments are given in response to the institution-wide deficit, making it difficult to link the funds to their uses, only to the provider institution that receives them.
7. Unofficial or Unstructured Copayments: Both SZF and MSA patients make copayments for drugs. For those identified as poor, the copayment is 500 Sf; for those identified as near poor, the copay is 1000 Sf. These funds are used to offset the drug budgets of the RGB units where services are received. SZF patients have a 2000 Sf copayment for drugs. In addition to these official payments, the focus groups organized as part of study six indicated that patients also made "unofficial copayments" to gain access to better or quicker health care. For the NHA study, there was no way to evaluate the magnitude of such payments. It was assumed that some unofficial payments were included as part of household expenditures measured in the household survey but it is likely that many such payments were not incorporated in the final NHA.
8. Correct GDP figure: There was some confusion over which GDP figure to use in order to make comparisons with other countries. One source of difficulty reflects the fact that, during the life of the study (five months) four different estimates of the "official" IMF GDP for Suriname were provided, the lowest of which was half of the highest. For the purposes of the Study, an official estimate of GDP agreed to by the MOF, the Central Bank, and IMF was used. At a second level, there is a trend to shift to purchasing power parity (PPP) estimates for international comparisons. This is a GDP adjusted for crude differences in the costs faced in each country.
9. Exchange rates: In 2000, the official exchange rate was devalued mid-way through the year to be more in line with the unofficial rate. This did not affect the NHA calculations reported in Surinamese Guilders, but translating these figures to U.S. dollars for international comparison required careful consideration. For purposes of the study, all conversions were made using the mid-2000 rate of 1,339 Sf per dollar.
10. Informal sector: Due to data and time limitations, the Study did not focus on the informal sector. In principle, persons working in the informal sector were included in the household survey. The sample was drawn from households with electricity and will incorporate many informal workers. However, the study of firms assumed that informal sector employers were not likely to provide health

benefits to their employees. This assumption might be tested in a future replication of the NHA.

11. Alternate providers: While respondents to the household survey indicated that they had visited “alternate providers” (traditional medicine), no separate expenditure information was provided. Therefore, the Study may have understated the amounts which people pay to visit alternate providers.
12. Interior vs. coastal areas: Similarly, the household survey was conducted only in the coastal areas. Therefore, any out of pocket expenditures made by people in the interior will not have been captured.

Some of these issues are discussed further in Annex D, “Institutionalization and Replication of National Health Accounts in Suriname.”

## Chapter IV

### Financing Health Care in Suriname: What do the National Health Accounts Tell Us?

#### A. Introduction

The purpose of this first effort to assemble a set of National Health Accounts (NHA) for Suriname was to identify the sources of funds supporting health activities, document the uses to which these funds are put, and assess the consistency between the scale and distribution of financial resources and the stated national priorities for health. Financial flows reflect a combination of deliberate policies, long-standing economic and strategic relationships, and the influences of markets and incentives. In a country such as Suriname, they also reflect the relationships with donor countries, in particular the Netherlands, with which Suriname shares so much history.

As noted above, the NHA data presented here reflect initial estimates of the distribution of financial resources being used to provide health care in Suriname. As was also noted, identifying all the financial flows in the system is difficult in a first NHA. The results therefore need to be recognized as the product of a first effort, which may raise more questions than can be answered from the data in their current form.

#### B. Total spending for health in 2000

During 2000, Suriname spent Sf 105,464.7 million, or USD 78,763,778 on healthcare. This comes to an average of Sf 241,456.20 per person living in the country. In dollar terms, health expenditures were USD 180.33 per capita out of an overall per capita GDP of USD 1,914. Health expenditures amounted to 9.42% of GDP.<sup>2</sup> It should be noted that this level of expenditure considerably exceeds the 6-8% noted as a target in the Ministry Policy Paper. It does suggest that, within the financial capacity for the country, Suriname is utilizing significant resources to meet its health goals. The possibility of devoting significant amounts of additional resources to address health problems therefore holds little promise here. As a result, reforms will need to emphasize more effective and efficient uses of resource rather than their increase.

Table 1 provides some comparative data for a number of countries in the region. Although the years differ and in some cases the data are not totally comparable, the comparison points out some important aspects of how different countries devote resources to health and, of equal importance, the relatively different roles for the public sector in meeting a country's healthcare needs.

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<sup>2</sup> See the discussion of the RLA funds for a qualification to this estimate.

**Table 1:  
Selected Indicators for Countries in Latin America  
and the Caribbean**

Country	GDP/PC 1998	Health as % of GDP 1998	Gov Share Health 1998	Per Capita Health Exp (USD)1998	Life Exp Males 1998	Life Exp Females 1998	Child Mortality 1998 (per 1000)
Suriname (2000)	1915	9.42%	43.33%	180.30	68	73	32
Argentina	7620	8.20%	57.50%	823.00	70	77	22
Bolivia	1065	5.80%	59.10%	153.00	60	64	78
Costa Rica	2769	8.70%	77.10%	489.00	74	79	15
Dom. Rep	2141	4.90%	38.50%	202.00	69	73	47
Guatemala	1638	2.40%	62.50%	87.00	61	67	52
Honduras	890	7.50%	36.00%	156.00	67	72	46
Jamaica	2045	6.00%	56.50%	212.00	73	77	24
Nicaragua	460	8.00%	53.30%	150.00	66	71	42
Panama	3202	7.50%	74.00%	449.00	72	76	25
Paraguay	1613	5.60%	35.60%	206.00	68	72	27

Most countries in the region spend a lower percentage of GDP on health than Suriname's 9.42%. Countries in the region spending more than 7.5% of GDP on health include Argentina, Costa Rica, Honduras, Nicaragua, and Panama. In comparison, the Netherlands spends 8.8% of GDP on health. Of the 132 countries listed in the World Development Report 2000-2001, 38 spent more than 7.5% on health. Overall the range was wide with 12 countries spending less than 3.0% of GDP on health and five spending more than 10.0%.

The relatively high percent of GDP devoted to health in Suriname would suggest that improvements in health system performance will depend more on using existing resources more effectively than on the mobilization of additional resources. This observation is reinforced by other studies undertaken in support of the Suriname health reform effort. In particular those relating to primary care (study 2), SZF (study 3), and payment and reimbursement options (Study 6).

### **C. Sources of Funds for Health: Public, Private, and External**

Health expenditures were generated from a number of different sources. Table 2 presents a summary of the sources of funds for the Surinamese health sector as estimated for the National Health Accounts.

**Table 2:  
Sources of Funds—Suriname National Health Accounts--2000**

Source	Amount (millions Sf)	Amount (thousands USD)	Percent
General Government	45,699.46	34,129.54	43.3%
Households Out of Pocket	21,116.90	15,770.65	20.0%
Firms (private and Government owned)	23,492.46	17,544.78	22.3%
Donors, NGO, foundations	4,048.26	3,023.46	3.8%
RLA	11,107.62	8,295.46	10.5%
Total	105,464.70	78,763.78	99.9%

Overall, public funds accounted for over 43% of all expenditures. Private expenditures (including Government-owned firms) were almost equal to public expenditures. (For this analysis, government-owned firms were treated as private firms since their employees are not government employees and they compete in the open market for labor and other resources.) External sources provided over 14% of the expenditures. Most of the external sources are RLA funds earmarked for provision of secondary and tertiary care not available in Suriname. These funds, amounting to over 10% of all health expenditures, remain in the Netherlands and the services they support are provided by Dutch providers in the Netherlands.

#### 1. Public Expenditures

While overall government spending as a share of GDP was relatively high in Suriname,<sup>3</sup> the government share of health expenditures was not particularly high. It is generally held that the industrialized countries pay a larger share of health costs from public sources than do less developed countries. However, the share of health expenditures, 43.3%, paid from public sources in Suriname is not particularly high. In the region, only the public sectors in the Dominican Republic, Honduras, Mexico, and Paraguay pay less than half of the total health bill. Percentages in other countries are in the 50% and 60% range, with Costa Rica paying 77.1% of health costs from public funds. As a comparison, in the Netherlands the public share is 70.7%. Of the 132 countries listed in the World Development Report, in only 27 did the government pay less than 40% of the total health expenditures while in 86 countries the government share of all health expenditures was over 60%.

Comparisons such as those above are difficult to interpret. They indicate a wide range of differences among countries, both in the relative share for health and, as well, the role of the government in providing the financial resources to support the sector. To some

<sup>3</sup> It should be noted that in Suriname, the government spends a greater percentage of Gross Domestic Product (GDP) than do most other countries. In Suriname, government spending in 2000 accounted for approximately one-third (33.7%) of GDP. Internationally, shares of government expenditure over 20 percent are quite rare, even in the countries thought of as “socialist!” Of the 132 countries listed in the World Development Report of 2000/2001, in only four did the government spend 30% or more of GDP in 1999. In 106 countries, government spent less than 20% of GDP and in 34 of these, the government share was 10% or less. In the Netherlands, the government spent 14% of its GDP.

extent, these differences reflect historical arrangements as they have adapted over time, often without deliberate policies. It is far less clear whether such comparisons can provide a basis for interpreting the existing indicators in any specific country. Nevertheless, observing the differences among countries can help to place the Suriname experience into a broader international context. In the current context of health reform, it is important to identify the way that the system is currently operating and explore the degree to which these patterns of financial flows are consistent with existing or newly defined policy objectives. This Study is a first step in that direction.

Table 3 presents a more detailed look at the sources of funds. It links the sources of the funds to the financial intermediaries that received them, and makes it clear that central government funding reflects two different roles. In addition to the provision of direct subsidies as part of the budgeting process, approximately one-third of government funds are payments to SZF on behalf of government employees. These payments reflect the Government's role as employer and represent its share of premiums for public sector employees. These costs are estimated based on the numbers of employees and the "appropriate" amounts are transferred directly to SZF from the Ministry of Finance without passing through the budgets of the public agencies.

**Table 3:  
National Health Accounts Project Matrix: Sources to Financing**

To: Financing Intermediaries	From: Sources					TOTALS
	Households OOP	Donors, NGOs, Foundations	RLA	General Government	Private Firms	
Ministry of Health		3,920.28		23,737.64		<b>27,657.92</b>
Ministry of Social Affairs	197.29			4,307.72		<b>4,505.01</b>
Ministry of Justice/Police				565.10		<b>565.10</b>
Ministry of Defense				3,704.32		<b>3,704.32</b>
SZF	4,793.32			13,384.68	412.24	<b>18,590.24</b>
Private Insurance	125.48				257.78	<b>383.26</b>
Housholds OOP	15,287.29					<b>15,287.29</b>
Foundations & NGOs		127.98				<b>127.98</b>
Firms Private/Government	713.52				22,822.44	<b>23,535.96</b>
RLA			11,107.62			<b>11,107.62</b>
<b>TOTALS</b>	<b>21,116.90</b>	<b>4,048.26</b>	<b>11,107.62</b>	<b>45,699.46</b>	<b>23,492.46</b>	<b>105,464.70</b>

Other studies have noted that this process generates considerable "revenue uncertainty" for SZF. The MOF transfers are often affected by cash flow limitations that result in SZF not receiving adequate funds. Since they have no alternative sources of support, this problem has been passed on to their providers. It has been noted that, in 1999 prices, SZF owed to providers at the end of 2000, an amount more than 1.5 billion Guilders more than their total year 2000 revenues! The problems generated from the uncertainty of funding level were made more restrictive by the high rates of inflation that resulted inevitably in real income losses for the actual health care providers. These issues are considered more fully in the SZF Policy Brief and the other SZF analyses.

In the case of the NHA estimates, making certain that the funds identified were those used for year 2000 activities is essential. The relatively loose management and oversight

of public expenditures makes this essential objective somewhat more challenging in Suriname. The differences between the funds received by financial intermediaries and their distribution to providers reflects, in part, the inability to allocate all of the funds to the correct year and/or activity.

Other government expenditures reflect different types of health system support. The funds for the MOH include support for the Medical Missions for provision of services to the Interior of the country as well as support for the Regional Health Services. The funds allocated to the Ministry of Justice and Police were reported as a lump sum, all of which were treated as being spent for hospitalization. The Ministry of Defense, in addition to paying for services, also operates a military hospital. In principle, determining the patterns of expenditure for public Ministries should be relatively straightforward, since payments and distributions are made utilizing public purchasing procedures. In fact, it was not possible within the time and resource limits of the Ministry of Justice and Police or the NHA Study to disaggregate the total sum reported by the Ministry. In the replication of NHA, the team(s) will need better access to the internal accounting and time for more detailed assessment of public expenditures in the sector. A list of organizations and contacts is included in Annex D which considers the replications strategy.

## 2. Private Expenditures

For the purposes of the NHA Study, private sector sources include both households and firms. In the estimates produced for the NHA, government-owned enterprises were included in the survey with private firms. Since the employees of government owned enterprises do not fall under civil service regulation, their working arrangements reflect the same factors that affect employees in private firms. Together, private expenditures accounted for almost half of all expenditures, 42.3%.<sup>4</sup> Household out-of-pocket expenditures included both expenditures for health insurance, 5.53% of all health expenditures, and payments to providers for services, 14.45% of all health expenditures. In the NHA structure, households are both a source of funds and a financial intermediary, since they also pay providers directly for services. In per capita terms, the Surinamese population spent out-of-pocket an average of USD 36.11, of which \$9.97 was for household contribution for insurance premiums and the rest for direct services.

Overall, firms paid almost one-quarter of total health costs in the year 2000. Individual firms differed considerably with respect to the level of funding and the services provided. However, over half of the employees in the sample worked in firms that reported spending between 100-300 thousand Sf annually per beneficiary (employees plus covered dependents). The firms that reported, covering almost one-third of all employees working in the formal private sector, spent a total of 14,055.24 million Sf or USD10,496,878. This amounted to over USD 750 per employee or USD 257 per beneficiary. Clearly private firms are a significant, and perhaps growing, source of

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<sup>4</sup> The basis for estimating private household expenses is presented in Attachment 2 and the basis for estimating private firm expenditures is presented in Annex 3.

financing for the health sector. This factor is also reflected in the increased number of insurers prepared to market group health policies identified in Study 6.

### 3. External Sources

Two other sources of funds are important. In 2000, donors, NGOs, and other foundations provided over USD 4 million. This includes the external support for the Medical Missions and for the country's large family planning NGO, as well as funds from international and multilateral donors. Since the National Health Accounts count financial flows in the year they are obligated, these latter funds may be large in one year and small in the next since multiyear projects are often funded in a single initial award. When NHA are done on a regular basis, these year-to-year discrepancies are less consequential.

Of far greater importance are the funds earmarked for health services provided in the Netherlands to referred Surinamese patients. In 2000, the RLA amounted to 10.5% of all health expenditures. These funds, although appearing in the Suriname financial flows, are all generated and spent in the Netherlands. Based solely on the funds used to support domestic health services, in 2000 Suriname spent only 8.1% of its own GDP on health, although total expenditures which include the RLA and other donors amount to 9.42%. The RLA essentially earmarks a large amount of foreign funds for advanced medical services and the support required for the recipients while abroad. They are included here as part of the flow of financial resources.

However, these funds represent a different element for policy purposes. In effect, they earmark at least 10% of health expenditures for high tech, specialty services to be produced and delivered outside of the country. While the availability of these services does reduce the need for some high level services in the domestic system, it is not clear how the scale and application of these funds affect the allocation of public sector funds. A major objective of health sector reform is improving the allocative efficiency of public sector expenditures. (Allocative efficiency means that public funds are spent in ways that make the maximum contribution to health improvement.) In general, this implies transfers away from curative and higher level specialty care and toward improved and expanded primary care and promotive health activities. The difficulty of achieving this objective internally is well documented in Study 2. Whether the specified use of RLA funds makes this objective easier or harder to attain is not totally clear, but needs to be directly addressed in the process of developing the health sector reform initiative.

#### D. What was the money used for?

NHA traces the flow of funds from the financial intermediaries that make the payments to the providers that receive them.<sup>5</sup> Table 4 presents the distribution of flows from public, private, and external sources to general categories of providers. Table 5 presents additional details.

**Table 4:  
Flows from Financial Intermediaries to Classes of Providers**

Category	Public Sources	%	Private Sources	%	External Sources	%	All Sources	%
Hospitals	21,128.39	45.45%	15,260.09	37.13%	867.87	5.79%	37,256.35	36.26%
Specialty Care	3,868.29	8.80%	3,868.29	9.54%	11,107.62	74.08%	18,897.83	18.39%
Primary/ Preventive Care	14,616.69	28.58%	16,835.99	40.97%	3,017.84	21.21%	34,633.07	33.71%
Private Pharmacies	2,888.84	6.21%	4,291.27	10.44%			7,180.11	7.20%
Health Administration	3,980.79	8.56%	787.95	1.92%			4,768.74	4.78%
<b>Total</b>	<b>46,483.00</b>	<b>45.25%</b>	<b>41,097.22</b>	<b>40.00%</b>	<b>14,993.33</b>	<b>14.59%</b>	<b>102,736.10</b>	<b>100.34% /99.88%</b>

<sup>5</sup> The total flows from financial intermediaries to providers should reflect the total amount of funds the intermediary obtained from the sources. In fact, these estimates do not achieve that degree of consistency. At the macro level, the data indicate a total of 105,464.70 million Sf was made available from existing sources while the same financial reported payments to providers of only 102,736.10 million Sf., a difference of less than three percent. For some individual sources, however, reported flows to providers exceed reported revenue from sources. In part, these differences reflect the nature of public finance in Suriname, with little or no annual reconciliation of expenditures, debt payments for previously provided services, midyear funding adjustments, and many limitations of the existing information management systems. They also reflect Study resource constraints and the fact that representatives from key financing intermediaries were not part of the data acquisition process. In any case, this issue needs to be better addressed in the proposed replication.

**Table 5:  
Expenditure Flows from Financial Intermediaries to Providers, by Type of Financial Intermediaries  
(in millions of Sf)**

Category	Providers	Amount from						Total
		public sources		private sources		external sources		
<b>Hospitals</b>		<b>21,128.39</b>	<b>45.45%</b>	<b>15,260.09</b>	<b>37.13%</b>	<b>867.87</b>	<b>5.79%</b>	<b>37,256.35</b>
	public hospitals	15,480.02	33.30%	7,628.32	18.56%	867.87	5.79%	23,976.21
	Private Hospitals	2,651.87	5.71%	7,631.77	18.57%			10,283.64
	Psychiatric Center	2,996.50	6.45%	0.00	0.00%			2,996.50
<b>Specialty Care</b>		<b>3,868.29</b>	<b>8.80%</b>	<b>3,921.92</b>	<b>9.54%</b>	<b>11107.62</b>	<b>74.08%</b>	<b>18,897.83</b>
	Medical Specialists	1,908.06	4.10%	3,224.52	7.85%			5,132.58
	Lab and Imaging	1,885.65	4.06%	697.40	1.70%			2,583.05
	Dialysis Centers	74.58	0.16%	0.00	0.00%			74.58
	Overseas Providers	0.00	0.00%		0.00%	11107.62	74.08%	11,107.62
<b>Primary/ Preventive Care</b>		<b>14,616.69</b>	<b>28.58%</b>	<b>16,835.99</b>	<b>40.97%</b>	<b>3017.84</b>	<b>21.21%</b>	<b>34,633.07</b>
	GP Gen Practice	1,666.19	3.58%	6,031.44	14.68%			7,697.63
	Private Dentist	0.00	0.00%	1,292.62	3.15%		0.00%	1,292.62
	Medical Mission	3,650.84	7.85%		0.00%	813.92	5.43%	4,464.76
	Family Planning Centers	4.66	0.01%		0.00%	178.57	1.19%	183.23
	Bureau of Public Health	2,138.73	4.60%		0.00%	162.55	1.08%	2,301.28
	Education and Training Inst	479.78	1.03%		0.00%	107.69	0.72%	587.47
	Youth Dental Services	1,428.18	3.07%	0.00	0.00%		0.00%	1,428.18
	Ambulatory Care Services	0.00	0.00%	4,393.19	10.69%		0.00%	4,393.19
	Other providers	1,686.88	3.63%	5,118.74	12.46%	1917.66	12.79%	8,723.28
	Regional Health Services	3,561.43	7.66%	0.00	0.00%		0.00%	3,561.43
<b>Private Pharmacies</b>		<b>2,888.84</b>	<b>6.21%</b>	<b>4,291.27</b>	<b>10.44%</b>			<b>7,180.11</b>
<b>Health Administration</b>		<b>3,980.79</b>	<b>8.56%</b>	<b>787.95</b>	<b>1.92%</b>			<b>4,768.74</b>
<b>Totals</b>		<b>46,483.00</b>	<b>100.00%</b>	<b>41,097.22</b>	<b>100.00%</b>	<b>14,993.33</b>	<b>101.08%</b>	<b>102,736.10</b>

The largest category of expenditures was for hospitals, which overall represented more than 36% of all health expenditures. However, the relative expenditures differed among the sources: public sources spent over 45% of their total expenditures on hospitals, while from private sources the hospital share was just over 37%. Expenditures on specialty care are more difficult to interpret. Public sources devoted only 8.8% of their funds to support these services while for private sources the percentage was only slightly more, 9.54%. However, external sources include the resources for overseas providers, all of which were paid through the RLA. When these funds are excluded, both public and private sources spent similar amounts on specialty services, but as Table 5 shows, with the bulk (over 80%) of private payments going to medical specialists while approximately half of the public expenditures were for lab, imaging, and dialysis services.

Both public and private sources spent on private pharmacies but much of the funds used to buy drugs are not directly identified in this estimate. Pharmaceuticals and other medical supplies provided directly by hospitals and other providers are incorporated into the data for those providers. During the Study, only the year 2000 budgeted expenditures were available for the public institutions. Therefore the analysis did not break down many aggregate categories although the MSA experience for earlier years provides an idea of the relative mix of expenditures within the institutions. However, these are the final expenditure figures which differ considerably from the original budgeted amounts.

**Table 6: MSA Expenditure by Category, 1997–99 (percentage)**

<b>Year</b>	<b>Secondary</b>	<b>Drugs</b>	<b>Diagnosis</b>
1997	81.8	13.8	10.6
<b>1998</b>	70.0	21.9	8.1
1999	66.1	22.7	11.4

A further complication related to managing expenditures for drugs is determining how to incorporate the role of BVGS, a parastatal body responsible for international drug procurement and some local production.<sup>6</sup> In principle, expenditures on drugs will show up in the overall expenditures of each provider. For the year 2000, expenditures on drugs from BVGS are presented in Table 7.

These data do not include the purchase by private pharmacies nor do they necessarily represent all of the expenditures on drugs by the institutions. In this current NHA analysis, it has been assumed that the expenditures for pharmaceuticals are incorporated in the estimates of total spending by providers and that the BVGS is like any other supplier to health services providers. For that reason, it has not been treated either as a financing intermediary or as a provider. Nevertheless, policies to be developed as part of the health reform effort will need to speak directly to this issue and how BVGS should be treated in future NHA estimates.

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<sup>6</sup> Study 6 has presented an extensive description and assessment of BVGS which incorporates recommendations for improved efficiency and effectiveness.

**Table 7:  
Expenditure by payer on drugs purchased through BGVS (sg.)**

<b>Client</b>	<b>2000</b>
RGD	603,907,748
Academic	1,053,493,080
Nickerie	374,828,498
's Lands	426,322,441
Military	63,229,839
Diakonessen	406,686,471
St. Vincentius	430,974,652
Total	3,359,442,729

Source: BGVS as summarized by Study 6.

Table 5 presents a more detailed breakdown of the flows from financial intermediaries to providers. This distribution offers some insights into the relative importance given to different types of expenditure by different sources and provides some indication of the functional allocation of resources necessary to assess the allocative efficiency of public and total expenditures. Spending on primary care and preventive services accounted for just over one-third of all funds. Separating these two functions is difficult since many providers generate both primary care and preventive care. In this category are included General Practitioners, the NGO providing reproductive health and family planning services, and the youth dental services, all of which provide both types of care. In some cases, such as the Bureau of Public Health, it is possible to identify the activities as prevention related. However, for most of the activities in this category, such a distinction cannot reliably be made from the data available.

The primary/prevention providers accounted for less than 29% of public sources and over 40% of private sources. It is important to note that, without including the external funds, the public and private shares were quite similar. Yet the public sources spent 25% more on hospitals, approximately the same on specialty services (excluding the RLA) and over five times the private amount for health administration. This latter observation reflects the fact that most of the private firms didn't include administration as a separate cost element associated with their health costs. Although some of the firms interviewed noted that there was a significant administrative cost burden, those costs were incorporated into their overall administrative costs and were not separately identifiable. The private sector also spent 50% more on primary/preventive services and on private pharmacies.<sup>7</sup>

Significant differences exist in the distribution of funds from different financial intermediaries. Annex A contains a detailed table presenting the separate flows from all

financing intermediaries. Table 8 presents the flows from public financing intermediaries.

**Table 8:  
National Health Accounts Matrix: Public Financing Intermediaries to Providers**

To: Providers	From: Financing Intermediaries					TOTALS	percent
	Ministry of Health	Ministry of Social Affairs	Ministry of Justice/ Police	Ministry of Defense	SZF		
public Hospitals	7,660.44	2,882.55	565.10	2,039.47	2,332.46	<b>15,480.02</b>	33.30%
Private Hospitals	800.00	599.99	0	137.98	1,113.90	<b>2,651.87</b>	5.71%
Psychiatric Center	2,986.26	10.24	0			<b>2,996.50</b>	6.45%
GP private practice			0		1,666.19	<b>1,666.19</b>	3.58%
Medical Specialist			0	553.76	1,354.30	<b>1,908.06</b>	4.10%
Private Dentist			0	0		<b>0.00</b>	0.00%
Lab & Imaging Diag Ctrs	61.40	0.25	0	0	1,824.00	<b>1,885.65</b>	4.06%
Overseas Providers						<b>0.00</b>	0.00%
Youth Dental Services	1,428.18					<b>1,428.18</b>	3.07%
Ambulatory Care Services						<b>0.00</b>	0.00%
Other Provider	844.67	134.45		650.15	57.61	<b>1,686.88</b>	3.63%
Employer-facilities						<b>0.00</b>	0.00%
Medical Mission	3,650.84					<b>3,650.84</b>	7.85%
Dialysis Centers	3.52	4.18			66.88	<b>74.58</b>	0.16%
Alter. HSP						<b>0.00</b>	0.00%
Rgnl Health Services	2,890.00	671.43				<b>3,561.43</b>	7.66%
Health Administration	1,342.05			767.00	1,871.74	<b>3,980.79</b>	8.56%
Education & Trng Inst.	479.78					<b>479.78</b>	1.03%
Family Planning Centers		4.66				<b>4.66</b>	0.01%
Bur Public Health	2,138.73					<b>2,138.73</b>	4.60%
Private Pharmacies				85.23	2,803.61	<b>2,888.84</b>	6.21%
<b>TOTALS</b>	<b>24,285.87</b>	<b>4,307.75</b>	<b>565.10</b>	<b>4,233.59</b>	<b>13,090.69</b>	<b>46,483.00</b>	100.00%

This table indicates that one-third of all public sector funds are spent on the three public hospitals, Academic, s'Lands and Nickerie. Almost half of these funds come from the MOH with significant additional funds from MSA, Ministry of Defense, and SZF. Overall, the expenditures for the public hospitals represented almost 32% of all MOH resources. Although the amounts are smaller, funding for the public hospitals uses a significant share of other public resources. For the MSA, public hospital payments accounted for two-thirds of available resources of the MSA and almost half of all

resources in the Ministry of Defense. While SZF payments to public hospitals were significant in amount, they represented less than 19% of SZF resources.

MOH also provided almost all of the funds for the two major primary care providers, the Medical Missions serving the interior and the Regional Health Services. For Medical Missions, the MOH is the only public source of funds. In the year 2000, it provided approximately 80% of the Medical Mission budget, with the other 20% generated from private donations and other external support. In the case of the Regional Health Services, all of the funding was public, with the MOH providing 81% of the financial resources, and the MSA providing the remainder. MOH also provided all of the funding for the Youth Dental Services

Table 9 provides the same information for the nonpublic financial intermediaries. While hospital payments are a significant part of private as well as public funding, other areas of financing are significant. In the case of household out of pocket payments (OOP) and private firms, the data have been developed from surveys and other sources unrelated to the NHA Study and reflect the fact that some data were not available. For example, the way the data were collected and analyzed did not permit determining the distribution of hospital expenditures between public and private hospitals. Therefore, hospital expenditures from these two sources were divided in proportion to the 1999 admissions. In that year, 73% of the admissions were in public hospitals and 27% were in private hospitals. Therefore, the aggregate amounts spent on hospitals by firms and households were distributed in this proportion. Additionally, the household OOP expenditures on ambulatory care services and other providers reflect the way that the questions were asked in the household survey. For other sources, expenditures on ambulatory care services are likely incorporated in other categories such as GP-private practice and, increasingly, within the hospitals. For private firms, the amount spent on hospitals is almost matched by the amount spent on GP-private practice providers. Firms also report significant spending on private pharmacies, a level of expenditure 50% higher than the amount spent by SZF during the same period.

Table 9 also demonstrates a number of other characteristics of health care financing in Suriname. The financial significance of the RLA fund has been discussed earlier. The data here demonstrate that it represents almost one-fifth of all nonpublic health expenditures and over 10% of all health expenditures in 2000. At the other extreme, the table demonstrates the relatively small role of private insurance in the financing of health services. From the interviews carried out in Study 6, there is an expectation of an increasing role. This observation was reinforced by some of the responses to the survey of firms used to estimate the financing provided from private firms.

**Table 9**  
**National Health Accounts Matrix: Private and External Financing**  
**Intermediaries to Providers**

<b>To: Providers</b>	Private Insurance	Household s OOP	Foundation s & NGOs	Private Firms/ Governmen t	RLA	<b>TOTALS</b>	
Public Hospitals	10.00	6,512.33	867.87	4,610.42		<b>12,000.62</b>	21.33%
Private Hospitals	13.45	2,408.67		1,705.22		<b>4,127.34</b>	7.34%
Psychiatric Center	0	0		0		<b>0.00</b>	0.00%
GP private practice	20.89	0		6,010.55		<b>6,031.44</b>	10.72%
Medical Specialist	10.17	0		3,214.35		<b>3,224.52</b>	5.73%
Private Dentist	0	0		1,292.62		<b>1,292.62</b>	2.30%
Lab & Imaging Diag Ctrs	0	0		697.40		<b>697.40</b>	1.24%
Overseas Providers	0	0			11,107.62	<b>11,107.62</b>	19.75%
Youth Dental Services		0				<b>0.00</b>	0.00%
Ambulatory Care Services		4,393.19				<b>4,393.19</b>	7.81%
Other Provider	13.18	1,969.22	1,917.66	3,136.34		<b>7,036.40</b>	12.51%
Employer-facilities						<b>0.00</b>	0.00%
Medical Mission			813.92			<b>813.92</b>	1.45%
Dialysis Centers						<b>0.00</b>	0.00%
Alternative HSP		0				<b>0.00</b>	0.00%
Reg Hlth Services						<b>0.00</b>	0.00%
Health Admin	0			787.95		<b>787.95</b>	1.40%
Educ & Trng Inst.			108			<b>107.69</b>	0.191%
Family Planning Centers		0	178.57			<b>178.57</b>	0.32%
Bur of Publ Hlth	0		163			<b>162.55</b>	0.29%
Private Pharm	15.42			4,275.85		<b>4,291.27</b>	7.63%
<b>TOTALS</b>	<b>83.11</b>	<b>15,283.41</b>	<b>4,048.26</b>	<b>25,730.70</b>	<b>11,107.62</b>	<b>56,253.10</b>	<b>100.00%</b>

Reported administrative costs varied widely and may account for the differences noted earlier between funds received and funds expended. For the MOH, administration costs represented 5.5% of total expenditures. In SZF, they represented 14.3%. Administrative costs for private firms were approximately 3.0% of total expenditures. However, as noted earlier, many firms did not track their indirect and internal expenditures. The amounts reported were typically those associated with the direct provision of services and not the organization's costs for implementing health service programs. A table which incorporates the public and private expenditures is provided in Annex A.

### **Tracking the flows to functions**

The NHA analysis also provides a framework to trace the flow of funds from the financial intermediaries to the functions as well as to the providers. In many cases, much of the allocation to functions occurs within the provider setting. Mapping these flows requires additional analysis of the disposition of resources within key provider settings. The previous discussion has drawn on the existing information to identify aspects of the expenditures by functions and to begin to identify the relative mix of services as they relate to general functional categories. The resources available for this first round in Suriname could only support this level of analysis. Future replications of the NHA will want to take that additional step.

In Annex D, “Institutionalization and Replication of National Health Accounts in Suriname,” it is suggested that the core NHA technical team be organized fairly quickly and begin to specify some of the more important data acquisition strategies to assure that replication will incorporate additional details and more extensive collaboration with the financing intermediaries. One task will be to take a closer look at the hospital funds and develop strategies for allocating these funds more specifically to functions. At the present, the aggregate amounts obscure the diverse functions supported by these funds. The challenge of attribution of funds is made considerably more difficult by the practice of transferring funds mid-year from the MOF to the hospitals in a lump sum not directly linked to specific functions or activities other than salary increases. The same is true for the expenditures of RGD, the Medical Missions, and the SZF.

At a minimum, the team needs to be able to identify flows to inpatient care, ambulatory services, differences between acute and chronic care, etc. within the aggregate expenditures already collected. Developing strategies to accomplish this could be an important starting exercise for the new NHA technical team and would also provide a basis for drawing more effectively on the hospitals' information systems and key informants.

## Chapter V

### Analysis and Policy Discussion

#### A. Key Policy Issues

The NHA describe the flow of funds from sources through financial intermediaries to final providers and/or functions. By itself, the NHA makes no judgements, and one distribution of resources is not inherently "better" than another. What is important is to compare the actual distributions with the Government's stated objectives and with available resources for the system, and to identify areas where changes in policies and practices might generate a more effective or efficient level of system performance. This section identifies some critical policy issues which policy makers can use the NHA results to explore. It also shares some of the observations made at the final workshop at which these results were shared with a wider audience.

1. Overall level of funding: Is it realistic? Is it adequate to enable the health system to address priority health needs? Are there gaps in access and/or coverage which could be addressed within existing resources? What are the trends in costs and expenditures and what implications do they have for the current level of health funding?

The general perception in Suriname was that the level of spending was lower than turned out to be the case. One participant noted that critics have pointed at a low level of funding—4% of GDP—as the reason for poor performance. In fact, that comment applies only to the public part of health expenditures. The study here strongly indicates that the level of financial effort is considerably higher and that improved performance will depend more on the effectiveness and efficiency with which resources are utilized to meet health needs.

2. The use of public funds and allocative efficiency: Do the patterns of distribution reflect public priorities for health? What can we learn about the allocations between primary and preventive care versus curative and secondary care? Is there a balance that public funds should be used to assure? If so, what options are available to make that happen?

The share of health expenditures from households and private firms, equal to public expenditures, has not been recognized nor considered in the process of planning public expenditures. The findings here indicate the importance of private sources in achieving national health objectives and the need to establish policies that provide incentives consistent with public goals. (Study 6 addresses these issues with more specificity)

In fact, the current mix of expenditures, with primary and preventive services representing at least one-third of all expenditures, reflects private priorities as much as public policies. As the NHA exercise is replicated, it should provide a basis for assessing

public spending priorities more explicitly and for structuring a system of health financing which can improve the cost-effectiveness of the system as a whole.

3. **Achieving effective performance:** While the NHA tells what is being spent, it does not, by itself, tell how efficiently or effectively these funds are being spent? Studies 2 and 6 identified many aspects of operations and resource use where there exists much room for improvement in performance not related simply to the levels of funding. The studies of SZF also point out these opportunities. Rather, the policy challenge is to structure the system so that incentives for more efficiency and cost-effective performance are operational. More money by itself will not suffice to improve significantly the overall efficiency and cost-effectiveness of the system.

Many participants pointed out that absolute level of funding is not important; the real issue is what you buy for the money you spend. It was suggested that benefit/cost analysis might help planners to see what is most effective (i.e., PHC). It was also noted that private sector cleverly shunts hospital expenses to the public sector. (This is not inherently bad. It depends on the mix of financing and the distribution of incentives for providers.) It may well be more cost-effective to provide these services publicly and structure a financing system that assures that the distribution of resources is consistent with this service production responsibility. Many of the other studies in this Project address this issue more specifically.

4. **Priority setting:** Are we able to set consistent priorities? How can we affect public funds expenditures? How can we affect private fund expenditures? How can we plan and oversee the performance of the system when resources flow from many diverse and, somewhat independent, sources? Here, again, the discussion of incentives, both positive and negative, in Study 6 provides an essential strategic view for the design of policies that encourage expenditures that reinforce national priorities.

Many of the participants asked why, with such a high percentage of healthcare in the private sector, the Government doesn't mention the private sector in its plans. The set of IDB-funded studies address many aspects of this issue. The NHA demonstrate the consequence of the private sector for the achievement of health goals. It remains as a challenge to incorporate this recognition into a public financing strategy. This is clearly an essential element in the Suriname health sector reform process.

## **B. How can the NHA support the policy reform process most effectively?**

Although primarily a descriptive tool, by presenting a formal set of empirical estimates of resource flows, the NHA can support the policy reform process in different ways.

1. Identifying priority areas for change. As a first step, the distributions described in the NHA need to be linked to stated policy priorities. Is spending almost half of the public expenditures on hospital services consistent with public policy objectives? Does the high level of private expenditures on private GPs have implications for public health strategies? Does it offer new opportunities for preventive care, or does

it make the potential need for public funding greater? At a broader level, how efficient is the public fund allocation in terms of emphasizing the most cost-effective areas of services? Do hospital expenditures include some primary and preventive care? Could they/should they include more?

2. Mapping potential changes in financial flows resulting from changes in policies and practices. The NHA traces the flows of financial resources from sources through financial intermediaries to the providers. NHA provide a tool for exploring possible changes in resource flows by permitting the policy maker to link specific changes in level of funds or payment mechanisms to the possible repercussions throughout the system. This would include the possibility for assessing changes in resource flows generated by changes in the methods of payment for hospital services, shifts to market valuation for individual services, changes in the economic incentives for appropriate referrals, etc.
3. Monitoring the impact of reforms. Over time, the NHA can document the effectiveness of policies designed to modify the allocation of resources by affecting access, the mix of services, and the equity of service provision. This initial set of NHA is only a first step in this direction. Subsequent iterations will be better able to map financial flows among the regions and, perhaps, among different socio-economic levels in the population. The groundwork for this capacity has been established in the first set of National Health Accounts. Hopefully, the utility of taking these next steps has also been established.

#### General public finance issues

Although the development of NHA has been carried out as a separate analysis, the validity and efficiency of the process is greatly affected by the general manner in which public funds are budgeted, allocated, and accounted for. Throughout the process of developing the NHA estimates, the team also noted the relative absence of disaggregated information, the periodic idiosyncratic revision of budgets mid-year, the lack of end-of-year reconciliation of expenditures, and little effort to "manage" the health expenditures within individual agencies, public or private. The recommendations for replication include the direct participation of technical staff from a wider range of agencies to facilitate a broader operational awareness of the utility of NHA and ways that the agencies themselves can utilize the process and the data to improve their own performance.

Many general limitations on the NHA efforts reflect the weakness of public finance practices in general. The absence of formal reconciliation of budgets to expenditures makes it difficult to assess the effectiveness of the way resources are used and limits greatly the potential for performance improving incentive strategies as recommended in Study Six. The lump-sum payments from the Ministry of Finance to the public hospitals mid-year also compromise the budgeting process and, as well, create incentives for less cost-effective and productive service delivery. Although beyond the mandate of this study, it is important to emphasize the degree to which it is difficult to address what are general public finance failings in the context of a single sector.

## Annex A

### National Health Accounts Matrix: Financing Intermediaries to Providers

To: Providers	From: Financing Intermediaries										TOTALS	
	Ministry of Health	Ministry of Social Affairs	Ministry of Justice/Police	Ministry of Defense	SZF	Private Insurance	Household s OOP	Foundations & NGOs	Private Firms/ Government	RLA		
Public Hospitals	7.660	2.882.55	565.10	2.039.47	2.332.46	10.00	6.512.33	867.87	4.610.42		<b>27,480.64</b>	26.75%
Private Hospitals	800	599.99	0	137.98	1,113.90	13.45	2,408.67		1,705.22		<b>6,779.21</b>	6.60%
Psychiatric Center	2,986.26	10.24	0			0	0		0		<b>2,996.50</b>	2.92%
GP private practice			0		1,666.19	20.89	0		6,010.55		<b>7,697.63</b>	7.49%
Medical Specialist			0	553.76	1,354.30	10.17	0		3,214.35		<b>5,132.58</b>	5.00%
Private Dentist			0	0		0	0		1,292.62		<b>1,292.62</b>	1.26%
Lab & Imaging Diag Ctrs	61.40	0.25	0	0	1,824.00	0	0		697.40		<b>2,583.05</b>	2.51%
Overseas Providers						0	0			11,107.62	<b>11,107.62</b>	10.81%
Youth Dental Services	1,428.18						0				<b>1,428.18</b>	1.39%
Ambulatory Care Services							4,393.19				<b>4,393.19</b>	4.28%
Other Provider	844.67	134.45		650.15	57.61	13.18	1,969.22	1,917.66	3,136.34		<b>8,723.28</b>	8.49%
Employer-facilities											<b>0.00</b>	0.00%
Medical Mission Dialysis Centers	3,650.84							813.92			<b>4,464.76</b>	4.35%
Alternative HSP	3.52	4.18			66.88						<b>74.58</b>	0.07%
Reg Hlth Services Health Admin	2,890.00	671.43					0				<b>3,561.43</b>	3.47%
Educ & Trng Inst.	1,342.05			767.00	1,871.74				787.95		<b>4,768.74</b>	4.64%
Family Planning Centers	479.78							108			<b>587.47</b>	0.57%
Bur of Publ Hlth		4.66						0	178.57		<b>183.23</b>	0.18%
Private Pharm	2,138.73					0		163			<b>2,301.28</b>	2.24%
Private Pharm				85.23	2,803.61	15.42			4,275.85		<b>7,180.11</b>	6.99%
<b>TOTALS</b>	<b>24,285.87</b>	<b>4,307.75</b>	<b>565.10</b>	<b>4,233.59</b>	<b>13,090.69</b>	<b>83.11</b>	<b>15,283.41</b>	<b>4,048.26</b>	<b>25,730.70</b>	<b>11,107.62</b>	<b>102,736.10</b>	100.00%

## Annex B

### Firms' Expenditures on Health

The data on the expenditure of private and state-owned firms were developed from a questionnaire distributed to all private firms operating in Suriname that could be identified from public records including business organizations, telephone directories, etc.<sup>8</sup> Every identified firm was invited to provide information on the number of employees and covered beneficiaries, expenditures by category of covered service and other information relating to how the firm organizes its health benefits. This included company clinics, full time medical staff, contracts with private physicians, purchase of private (and SZF) insurance, and combinations of these strategies. To encourage cooperation, assurances were given that the data would be kept confidential and that the identity of individual firms would not be revealed.

As of 29 September 2001, data had been received from 75 firms representing 13,982 employees of the estimated 40,000 employees in the formal private sector. This represents data on more than 34% of employees in the sector. A summary of expenditures per beneficiary as reported by these firms is presented in the following table:

<b>Expenditures per Beneficiary</b>	<b>Number of firms responding</b>	<b>Number of employees</b>	<b>Number of beneficiaries</b>
Below 100K	12	389	1090
100-200	5	3,651	9744
200-300	14	3,549	9873
300-400	22	3,689	8849
400-600	13	1,564	4593
>600	8	1,103	6688
(100-300)	(19)	(7336)	(19916)
Total	75	13,982	4

Approximately one-half of the employees in the sample are working in firms that spend between 100 thousand and 300 thousand SRG per beneficiary (employees plus dependents that are covered) per year. The overall amount of expenditure reported by these 75 firms for the year 2000 was 14,055.24 billion SRG.

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<sup>8</sup> The initial screening of firms based on industry data, telephone directories, and commercial organizations indicated a high degree of variability in size and structure, with few firms in most of the major industrial categories. This made design of any sampling frame subject to a high degree of variability and high sensitivity to response rates. As an alternative, a decision was made to opt for an "open" invitation which would provide the largest amount of data recognizing that simple extrapolation of survey results to the population would not be an available option for generating the total estimate. The very large response rate obtained by this method provided a more informed basis for the estimates describe in this section. With this information, it would be possible to design specific cost-effective surveys to validate and likely improve these estimates.

To estimate total expenditures by firms for health, it is necessary to utilize this information to infer expenditures in firms employing the 66% of employees not included in this sample. Because these respondents do not constitute a statistically representative sample of firms, it was necessary to develop a protocol based on clear assumptions for estimating expenditures by the universe of firms for the same time period. **(Key assumptions are highlighted in bold type.)** The method used is described below. It is recognized that any such method is arbitrary. We have tried to utilize assumptions that are reasonable but recognize that there may be differences in the view of what is "reasonable." For this reason, we are using a method sufficiently transparent that alternative estimates could readily be explored. In the long run, to the extent that such data are recognized as being important, efforts to generate a more consistent and valid data set would be justified.

First, it is important to emphasize that we start with reported data for a considerable share of the covered employees. The estimate of expenditures by firms for health services to their employees is constructed from a large pool of information voluntarily provided by employers representing over 34% of all employees in the sector and accounting for over 14 billion SRG in expenditures in the year 2000. Although not representing a statistical sample, these data do provide a basis of knowledge about the experience of firms in the sector that can be used to inform the development of an estimate for the sector as a whole.

The objective of this exercise is to estimate the level and distribution of expenditures for the employees not included in the sample. For purposes of this analysis, we are using the estimate of 40,000 for total employment in the sector. We recognize that not all firms provide health coverage for their employees, although the interviews carried out in Study Six indicate that such benefits are quite prevalent. To adjust for this reality, **we are assuming that 25% of employees in the sector have no health expenditures made on their behalf by their employers.** When these 10,000 employees are subtracted, we need to estimate the expenditures made on behalf of the remaining 16,018 employees not included in the sample and, for whom, we assume company expenditures have been incurred. Using the average of 2.7 total beneficiaries per covered employee in the reported sample, the 16,018 employees represent a total of 43,249 beneficiaries.

The firms in the sample report an average annual expenditure per beneficiary of 347,000 SRG. However, firms reporting between 100K and 300K SRG per beneficiary cover more than half of all the employees. For this modal range, average expenditures per beneficiary were 208,483 SRG. **Our estimate of expenditures for the additional 16,018 employees is based on this group having the same average properties as those in the firms spending 100-300 K per person.** For the category, firms spent an average of 208,483 SRG per person. For the 43,249 beneficiaries for whom we are estimating expenditures, this amounts to 9,016.68 million SRG. This number, added to the 14,051.00 million SRG already reported by the firms responding yields a total estimate of 23,067.68 million SRG for the amount firms spent in the year 2000 on health services for their employees.

To implement the next steps in the NHA exercise, this amount needs to be distributed to the appropriate providers and functions. In the case of the reporting firms, many have provided breakdowns of expenditures by type although for others, amounts were reported in aggregate terms. These data were used for that part of the distribution. **For the additional estimated expenditures of 9,016.68 million SRG, this amount of money is distributed among provider categories and functions in the same relative proportion as the distribution for the expenditures in the firms reporting expenditure of 100K-300K.** This distribution and the resulting estimates for the additional expenditures are presented in the table below. The categories are those reported by responding firms. The percent distribution is that reported by firms spending between 100,000 and 300,000 SRG per beneficiary. The amounts represent that percentage share of the estimated total of 9,016.68 million SRG estimated to have been expended on the beneficiaries not represented in the reported sample.

Category	Percent	Amount (000,000)
Gen. Practitioners	13.34	1,202.83
Hospitals	30.27	2,729.35
Medical Specialists	13.03	1,174.87
Pharmaceuticals	18.71	1,687.02
Dental	5.48	494.11
Optical *	6.20	559.03
Lab and diagnostics	4.07	366.98
Other	1.11	100.09
SZF premiums <sup>9</sup>	0.63	56.81
Private Insurance Premiums	0.29	26.15
FOR (Workmens Comp) *	2.61	235.34
Administration	4.28	385.91
Total	100.0	9,016.68 (9018.48)

- = consolidated into the "other" category

The data in the above table were combined with the reported data to prepare the overall estimates of expenditures by firms in the NHA tables presented in Annex A. Total expenditures by firms on health care for employees are estimated at 14,051.0 million reported and an additional 9,016.68 estimated for a total of 23,067.68 million SRG in the year 2000.

<sup>9</sup> As part of the NHA, the amounts estimated for premiums for SZF and private insurance represent flows from the firms as Source to the insurers as Financial Intermediaries. The rest of these expenditures are flows from the firms as Financial Intermediaries to the direct providers

## Annex C

### Household Expenditures on Health

All these estimates are derived from the household survey carried out by the Bureau of Statistics. The estimates are based on an add-on section developed by Bitran and Associates for the IDB supported health reform studies that relates specifically to household health behaviors and expenditures. The estimates were developed using the existing analyses carried out by the HH Survey team, Bitran and Associates, and our own reworking and cleaning of the data set to permit more targeted estimates. In many cases, the structure of the survey limits the degree to which it is possible to distribute household expenditures among specific providers and functions.

In general, the national estimates were generated by applying the experience in the sample population of 4941 individuals to the total population. Since the sample was selected to be self-weighting, no alternative weighting was necessary. The estimates of total population are based on 2000 midyear population of Suriname, estimated at 436,768. This estimate is based on a 1999 year end population of 433,517 and a growth rate of 1.5%. The population reflected in the household survey reflects only the experience of the approximately 90% of the population living in areas with a wider range of health care options. The experience of those served by the Medical Missions is not reflected in the survey, although the NHA will reflect expenditures from other sources serving this population. As a first approximation, we assume that the 10% of the population in the interior account for an insignificant amount of OOP expenditures. The estimates here are based on a population of 393,091.

The household survey represents the only consistent source of information for estimating the out of pocket expenditures for health. For the national health accounts, we are interested in identifying two types of household expenditures: payment for insurance including contributions to employer coverage and payments made in response to specific health needs.

1. Flows from households to insurers are derived from the health insurance module of the household survey, questions S1-S5 which ask directly about household payments for insurance. The survey reported the distribution of the sample population among the different options for coverage and, for each type of coverage, reported the amount paid directly by the household. The distribution of coverage and the average OOP expenditures for each group was generalized to the total population. The results are summarized in the following table.

Insurance Type	% Indiv in Sample	# total pop	Avg exp (SRG)	Total
None	32.8	128,934	--	---
SZF (only)	27.6	108,493	43,728	4,744,181,904
SZF (+Employer)	(14.7)	( 57,784)	348	20,108,832
SZF (+Private)	( 0.7)	( 2,752)	10,548	29,028,096
<b>SZF Total</b>				<b>4,793,318,828</b>
MSA	23.9	93,949	2,100	<b>197,292,900</b>
Employer	14.7	57,784	12,348	<b>713,516,832</b>
Private insurance	0.7	2,752	45,564	<b>125,483,256</b>
<b>Total</b>	99.7	391,912		<b>5,829,611,816</b>

It should be noted that the amount households reported paying for their share of SZF premiums, 4,793.3 million, is greater than the amount reported by SZF as being received on behalf of household share of the total premium transfer.

It is important to note that a number of individuals covered with private insurance or employer provided coverage also paid premiums into SZF. These expenditure might reflect limitations on the coverage provided by the employer or available for purchase by the individual. Overall, these payments represented only a small amount of the overall household expenditures for SZF coverage.

2. Flows from household as source to household as payer<sup>10</sup> are derived from the modules that ask about health care experiences: the ambulatory care module, the hospitalization module, and the chronic care module. The following describes the various categories of payments and how the information was used to produce national estimates.
  - a. The ambulatory care module asks about utilization experience with a one-month recall. It asks separately about the condition and for each type of response, e.g. traditional healer, pharmacy, GP, etc. it asks about payment experience--What was paid and how much was reimbursed. *(It should be noted that the survey may understate the degree to which HH expenditures are actually reimbursed. In many cases, fewer respondents answered the question about reimbursement than answered the question about payment. In principle, both questions would apply in every case. It is not possible to know if the lack of response implies no reimbursement-as it is interpreted here-or whether reimbursed amounts are under reported,)* Only the summary data (which don't permit allocating the OOP expenditures to specific providers) are in the existing tables. A more detailed analysis will have to be made, but an initial estimate of the overall amount can be made as follows:

<sup>10</sup> In the NHA methodology, households are viewed as having two separate functions: a source of funds for the health sector and an actual purchaser of health services.

- 1) In the sample of 1201 households, there were 4941 individuals, of whom 680 reported an illness within the previous 30 days. Assuming no seasonality, this implies a total of 8160 illness episodes from this population over the entire year, an average of 1.65 per individual.
  - 2) Using the experience of the sample population, it would be expected that the population as a whole would experience a total of 648,600 episodes, an average of 1.65 episode per person.
  - 3) Not including transportation costs, each person in the sample who experienced an episode of illness spent an average of 6650 sf. The projected total of 648,600 episodes would represent household OOP expenditures for ambulatory care of 4,393,191,000 sf
  - 4) These estimates assume that the distribution of insurance coverage in the sample population reflects that of the population as a whole. These data need further detail from the survey instruments if they are to be allocated to the appropriate providers/provider types but they represent the amount "transferred" from HH as source to HH as intermediary.
- b. While the hospital care module asks about hospital experiences within the previous year and whether the experience occurred within the last 30 days. The questions that follow seem to ask only about the most recent experience. This means the survey responses will miss expenditures related to any earlier experiences within the same time period. An initial estimate of the amount of OOP expenditures made by households can be derived as follows:
- 1) Of the sample population of 4941, 278 persons reported a hospitalization within the past year. This is a rate of 5.63%.
  - 2) Projecting this rate to the applicable population of 393,091, we estimate 22,131 hospitalizations for the year. (This number would not include hospitalizations from the population served by the Medical Mission omitted from the survey base.)
  - 3) Not including transportation, surveyed individuals who reported having a hospitalization spent an average of 40,310 sf.
  - 4) Applying this number to the projected hospitalization from the total applicable population, we estimate household OOP expenditures for hospitalization to be 8,921,015,500 sf.
- c. The chronic disease module asks respondents if they had any chronic illness and what actions they had taken in the previous 30 days.
- 1) Of the sample population of 4941, 664 individuals, 13.4% of the sample, reported having a chronic condition. The table below gives the numbers who took specific care-seeking actions and the average amount paid OOP in the previous 30 days as follows:

Action	Number	Avg net exp-30 days	Avg net annual exp	% of sample
Homemade/family medicine	179	770	9,420	3.6%
Medicine from Pharmacy	221	2470	29,640	4.5%
Health Facility	332	4500	54,000	6.7%
Traditional healer	3	3330	39,960	0.06%

- 2) For the population as a whole, this would represent 52,674 individuals with chronic diseases, some of whom took no action during the 30 days and some of whom took more than a single action. The estimated number in the population as a whole and the estimated total OOP expenditures for each type of action is presented in the following table:

Action	No. in population	OOP expenditures
Homemade/family medicine	14151	13,291,620
Medicine from Pharmacy	17689	524,301,960
Health Facility	26337	1,422,198,000
Traditional healer	236	9,430,560
Total		1,973,083,200

- 3) For the estimated 52,674 individuals with chronic diseases, net OOP expenditures for chronic care in 2000 are estimated at 1,973,083,200 SRG.

The estimates for household out-of-pocket expenditures derived from the above exercise are presented in the table below.

Category	No in sample-Annualized	Frequency in sample	Avg. OOP	No. in pop (estim)	Total OOP (estim) SRG	Total-adjusted for Inflation
Ambulatory	8160	1.6/capita	6.65	648,600	4,393,191,000	
Hospitalization	278	5.63%	40,310	22,131	8,921,015,500	
Chronic <sup>11</sup>					1,973,083,200	
Total					15,287,289,700	

<sup>11</sup> Chronic experience based on first 26 segments (half the sample)

**Annex D:  
Institutionalization and Replication  
of National Health Accounts in Suriname**

**I. Purpose of the Initial National Health Accounts Study**

The purpose of NHA analysis is to provide a means for addressing key general questions about the health sector and the result of contemporary policies. The current Study produced, in a very limited timeframe, the initial NHA estimates in Suriname. These estimates, while useful for policy discussion, were out of necessity rough and elementary, in part due to the limited time and in part due to organization of data within the country. The data collection strategy, methodology, and issues encountered are described elsewhere in the Study Final Report.

At the same time, the Study attempted to document the areas where data could be improved and to recommend strategies for preparing subsequent estimates on an ongoing basis. The two tasks of producing the initial estimates and laying the groundwork for institutionalization of the NHA process are of equal importance to the overall objective of supporting health sector reform through better policies and more effective implementation. The initial NHA estimates provided a general notion of resource flows and allocation in Suriname's health sector. In addition, the process provided an orientation and basic understanding of the NHA methodology to individuals in the health sector, especially staff of the Ministry of Health (MOH) Project Execution Unit (PEU). Replication of the NHA on a periodic basis would allow policy makers to:

- Make comparisons over time of changes in resource levels and allocations in order to track trends.
- Evaluate the effects of changes in health policy, including those instituted as part of the health sector reform process.
- Form more precise estimates of amounts and allocations than those available to this Study.
- Maintain a basis for policy dialogue on health sector issues.

Although the logic of NHA is relatively straightforward, developing an accurate set of financial flows is a challenging process. For many elements of data, the linkages required for NHA are not necessarily present in existing information systems in Suriname. The following sections discuss issues that need to be considered in order to improve the quality and efficiency of future NHA estimates, should policy makers determine that there is sufficient interest to institutionalize and replicate the NHA.

## II. Considerations for Institutionalization and Replication

### A. Institutional “home” for the NHA

The initial NHA was carried out by an international consulting firm (Management Sciences for Health) along with a local firm (Health Care Organizers and Providers), under the overall direction of the PEU. In the future, the NHA could be based in any one of a number of places. There is no perfect institution and there will be trade-offs, but any future institutional “home” should have a mix of the following characteristics.

1. Protection from politics: As the NHA is an analytical exercise, it should be kept protected from potential pressure to come to certain desirable conclusions.
2. Access to and knowledge of data: An entity which already works with a number of data sources may have advantages in collecting the NHA, as the learning requirements would not be so substantial.
3. Leverage to gain cooperation for data collection: Relatedly, as the NHA requires some data which may be controversial or which require some effort to produce, it may be desirable to base the NHA in an institution which can exert some motivation to data sources.
4. Close to use: Ideally, the NHA would be executed by an organizational setting that has an interest in using the results, which would provide an incentive to do a thorough job.
5. Credibility and infrastructure: The selected institution should have credibility and sufficient human and material infrastructure to effectively carry out the work.

Based on the above characteristics, the following are possible “homes” for NHA in Suriname:

- Ministry of Health/Project Execution Unit
- University of Suriname
- Ministry of Finance
- Central Bank of Suriname
- General Bureau of Statistics (GBS)
- Other possibilities to be identified

Participants in the final workshop explored this issue. Participants felt that both the MOH and the GBS needed to be directly involved in the oversight and execution of future NHA studies, although it was recognized that the actual “team” may be drawn from a wider set of organizations. For continuity, closeness to uses, and existing infrastructure, it is recommended that, at least for the next round, the NHA technical development team be organized and managed out of the MOH/PEU.

## **B. The NHA Core and Extended Team**

The NHA Team should include a wide range of institutional interests in order to encourage key institutions to participate by facilitating access to needed data and by cooperating in surveys and other data collection activities. At least some of the members should be seconded part-time from key agencies. (A key agency would be one that had a major role as source or financial intermediary.) While the NHA may be based in its institutional “home” (i.e., the MOH/PEU), team members should have “roots” in other institutions to facilitate access to data.

One approach would be to establish a small core team of experts responsible for actual work on the NHA, along with a larger extended panel or technical working group which would meet periodically to review progress, oversee the future replication of NHA, resolve on-going technical issues, and perhaps take on some analytic tasks. This extended team would report periodically to the Health Sector Reform Steering Committee as well as important and interested stakeholders from other public and private institutions. Individual Team members, in addition to representing significant institutions, including the private sector, should be familiar with national economic statistics and accounting practices, the health system and health policies, and the information produced by different entities in the health system. Such familiarity will help to identify “hidden” health expenditures in their institutions that may not be readily obvious.

Participants in the final workshop echoed this theme. They felt that the public should get more information about health spending and how resources flow in the system. They also suggested that it should be possible to specify a core set of information to be generated from providers and other agencies to support the collection of health cost data.

### **Technical structure**

An NHA can usually be produced in 6-12 months by a team of 3-6 part-time analysts. It is anticipated, therefore, that the core team's work on NHA would be part of their other work responsibilities. The core team would consist of the following positions:

- Project Manager (1 person, approx 10% time)
- Senior Researcher (2 persons, approx 15% time each)
- Research Assistant (3 persons, approx 17% time each)
- Administrative support (1 person, approx 10% time)

The NHA responsibilities of both the core and extended teams should be formally incorporated into individual position descriptions. In addition, key technical contacts in the sources, financial intermediaries, and selected key providers should be identified. Model terms of reference for the team are included in Addendum A. The option of contracting out the work of the core team has been considered but such a

strategy would reduce ownership and responsiveness of institutions in providing data and in other forms of cooperation.

### **C. Frequency of replication**

In order to be able to measure change over time and to gauge the impact of policy changes, it is recommended that the NHA analysis be replicated every two years. It is unlikely that more frequent (i.e., annual) replication would show enough year-to-year change, and less frequent replication would not allow the establishment of a periodic information base over time. However, bi-annual replication does not mean that the Team will be doing nothing during the “off” year. Rather, during the off year the Team will be planning for the following year’s activities based on a review of the previous year’s results, including deconstructing why entity totals don’t match, enlisting new stakeholders in the process, and advocating for reforms and changes in the way institutions maintain records. To sustain any momentum produced by the current Study, the Team should meet as soon as possible to set objectives for the next round, define tasks, and prepare plans for resolving some of the data acquisition issues which surfaced in the first Study. These issues are discussed in section III below.

### **D. Hardware and software needs**

While the NHA requires a lot of data and research, hardware and software needs are minimal. While NHA could be assembled using standard spreadsheet programs, it is recommended that the team use the dedicated NHA software developed by Harvard University. During the initial NHA study, the PEU acquired one copy of the software, and additional copies are available for USD 50. The NHA software runs on any typical desktop or laptop computer, and any needed data inventory or modification should be done on a similar computer using Excel or other spreadsheet program. In some cases where large amounts of survey data must be processed to generate information for the NHA, more powerful hardware and software resources may be needed. This is rare, however, and most likely an institution responsible for such a survey would possess such resources. The dedicated NHA software is valuable as a training tool and for mapping the country’s health care financing structure (i.e., identifying the entities in the system and the flows between them), but the manual suggests exporting the NHA data to a spreadsheet program which has more sophisticated facilities for data modification, analysis, and presentation.

### **E. Staff and institutional development needs**

Members of the PEU have acquired a general familiarity with the NHA process and a detailed familiarity with many of the data collection issues. Regardless of the future institutional home for NHA, the PEU will likely play a role in replication of NHA. Similarly, the Managing Director of HECORA has become familiar with the NHA methodology and process. While these human capital assets should be drawn upon, the Government may also wish to support training for the senior person responsible

for NHA to ensure that he or she has sufficient exposure to the policy and technical issues involved in NHA. This may require a regional or international training. Other members of the NHA team should also receive a brief orientation to the NHA methodology and process, which can probably be provided by existing human resources. The best strategy for bringing the team “up to speed,” however, is on-the-job training and exposure; there is no substitute for participating in one round of NHA.

#### **F. Estimated costs for replication**

In general, the costs for carrying out the NHA will depend on availability of technical talent and the need to collect data in addition to that which is already being routinely collected. It may also be possible to receive funding from donors to maintain the NHA

To replicate the NHA in Suriname would require approximately USD 20,000 in the year in which it was actually done, and approximately USD 6,000 in the “off” year. This assumes that the core team consists of staff seconded from their current positions within their institutions and that information on household expenditures and private firms comes from add-ons to existing data collection processes. The only quasi-investment cost would be USD 5,000 for regional or international training of the project manager in the NHA methodology. A detailed breakdown of these costs and the assumptions on which they are based are provided in Addendum B.

### **III. Resolving data gaps and issues**

The following sections highlight some of the major issues encountered during the initial NHA in Suriname and tasks which should be undertaken by the Team to resolve them and thereby produce a more precise NHA. A detailed and helpful discussion of general issues and solutions along with a case study and model workplan is presented in the “Producer’s Guide to National Health Accounts,” which will soon be available on the World Bank’s Web site.

#### **A. Team preparation for the next NHA**

As described in detail elsewhere in this report, even after several months of effort, a number of data gaps and issues remained. The quirky ways in which data are reported within Suriname’s national health system poses a major challenge to producing accurate and efficient national health accounts. In any replication of the NHA, resolutions of these gaps and issues will need to be found. Unfortunately, performance in this area is not within the manageable interest of the NHA Team or even within the MOH. In cases where resolution of the basic issues may not be possible (i.e., delayed reporting of actual vs budget expenses, late payments, debt and arrears), decision rules will have to be developed.

In general, the Team's initial task would be to develop the analytic protocols for estimating a more extensive and precise set of NHA. Working on a part time status, the NHA Technical Team should begin by reviewing the initial NHA and identifying tasks that can be initiated that will lead to a stronger (more informative) NHA in the second round, ideally year 2002

Specific tasks include:

- Designing an overall strategy for data collection, along with components for each major financial intermediary.
- Identifying key representatives from each relevant institution
- Developing, for one of the public hospitals, a more detailed analysis of the distribution of expenditures among functional categories. This would be carried out with participation of the hospital's technical staff working with the NHA team. The goal would be to track a sample of hospital-based experiences and disaggregate the resources into their functional activities. Such an analysis could provide the empirical basis for estimating the distribution of providers' funds to functions.
- Building on the health reform studies, working with a small group from RGD and from Medical Missions to develop a better sense of how their activities are distributed among the functions. Study 2 provides a good place to start, and the ability to identify the functions of expenditures is an essential part of assessing the allocative efficiency of public expenditures.
- Advocating for reforms in collection and reporting of data. While definitely a longer-term prospect, the Team should identify specific desired reforms for more efficiency and timely reporting of data throughout the health and finance systems, and then advocate for their adoption. Reforms include the use of categories and expenditures that allow meaningful aggregation and analysis.
- Developing a coding scheme for collected data. In part due to the tight schedule, the initial NHA Study did not develop a coding scheme for the data. This should be done during the next round, drawing on the work of PAHO and OECD and the materials in the NHA Producer's Guide. As noted by the Producer's Guide in stressing the importance of documentation, "literally hundreds of decisions are involved in preparation of a typical set of health accounts. Thorough documentation of each decision at the time it is made allows for a quality control check and facilitates replication of the accounts in future cycles. Prompt documentation is desirable because the hundreds of decisions made can blur memories."

## **B. Specific challenging areas identified during the initial NHA**

### **1. Public sector**

Many of the issues relating to public sector data are endemic to the system of public finance in Suriname and therefore probably cannot be immediately resolved. The main problems were related to a variety of late payments. While payments were to be counted for services rendered during 2000, regardless of when they were paid for, lingering issues and disagreements in the Surinamese health system meant that current and reliable information was not always available. For instance, agreement had still not been reached on levels of payments (tariffs) to physicians for the year 1999, while due to serious lags in payments, funds paid during 2000 were often for services rendered in previous years. In the absence of major reforms in public finance, future NHA will also have to reply on budget estimates, which unfortunately are very unreliable; however, these can be adjusted as and when the audited expenditures finally become available

In addition, the categories of expenses provided by institutions were not designed for the NHA. In general, governments use institutional rather than functional classifications, as they historically not been very interested in how much funding goes to which functions. Similarly, the Ministry of Labor may be interested in how much it is spending on services or programs for certain population target groups, but not about how much it is spending on health (as opposed to training, water/sanitation). SZF payments have to be examined to be sure that they include only those for health services.

### **2. Private and public firms**

As noted elsewhere in this report, a survey was conducted in order to collect expenditure information from public and private sector firms. In the absence of an institution which collects and can provide this sort of information, an accurate NHA will require that this survey be repeated for each replication. This has obvious cost implications. It will be obviously be more cost effective to piggy-back onto an existing survey, if one is to be done by the Chamber of Commerce or other body. In the future, more comfortable time horizons should allow more disciplined sampling for such surveys, which will in turn allow greater confidence in the findings.

### **3. Households**

Similarly, the NHA Team used data collected for the household survey (Study "0") to produce national estimates of out of pocket payments for health. As the household survey had been designed for an entirely different purpose (estimating consumer demand for health services), the structure of the survey limited the degree to which it was possible to distribute household expenditures among specific providers and functions, one of the main purposes of the NHA. While a number of devices were used to adapt the data for the purposes at hand, the resulting estimates are credible but not completely worthy of confidence. For a future NHA, this gap will have to be filled. The main options are an expenditure survey conducted specifically for the NHA (probably too expensive) or adding specific elements, probably including a

sampling variation, to the annual survey conducted by the General Bureau of Statistics. There does not seem to be another source of this type of information.

#### **4. External donors**

Information on funds provided by donors is more problematic. Some funds go through the government and could be found there. However, some external funds flow directly through the private institutions providing services. In particular, the Medical Missions all receive some ongoing support directly from the home office in the Netherlands. Stichting Lobi, as the IPPF affiliate in Suriname receives external resources from the IPPF and, as well, from in-country donations. In fact, Stichting Lobi is identified by IPPF as one of the most successful revenue generators of all affiliates in the region!

#### **5. Need for classification system**

The Study tried to use the ICHA-OECD categories, but these should be reviewed at the planning stage of the next NHA. Greater precision on definitions will help rule out double-counting or omission (i.e., do reported personnel costs include benefits for retirees, are debt payments included, are in-kind benefits such as food included). It is probably not realistic to propose the creation of new categories just for the NHA. If it is not possible to use the standard categories, the Team should ensure a “cross-walk” between them. In particular, codes are needed for analyzing the public private mix, and, as noted above, it was very difficult to distinguish provider from function. To divide expenditures into functions, some special studies may be required, although the challenges for these are significant, including the unreliability of data furnished by providers and the cost of the study. (It is recommended that such studies be implemented by the NHA Team as a pre-NHA activity). The NHA has to include health activities paid for by non-health institutions, and, conversely, throw out non-health activities provided by health institutions

## **Addendum 1: Model Terms of Reference for the NHA Core and Extended Teams**

### **Core Team**

1. Develop work plan, including data collection strategy, strategy for dissemination of results,
2. Bring in stakeholders during the design phase in order to identify all entities which will become the basis of the NHA analysis
3. Handle all logistics for data collection (e.g., schedules, letters, liaison, clearances)
4. Collect data from sources
5. Coding and manipulation of data and entering into NHA software
6. Identify inconsistencies in data
7. Maintain all paper and electronic files relating to data collection and analysis
8. Produce NHA output tables and reports

### **Extended Team or Steering Committee**

1. Approve workplan and monitor progress of work and deadlines
2. Ensure that team has access to material resources needed for the NHA, including space, computers, funds, etc.
3. Ensure that methodology used is consistent with relevant policy issues and questions
4. Help to ensure that results and analysis are heard by policy makers and other major stakeholders, including organizing and following up on dissemination meetings; this includes making recommendations for the future of NHA
5. Help the core team to identify potential data sources and then to facilitate access to human and written data sources and encourage cooperation from those who have the data
6. To provide core team with technical expertise in their institutions so as to resolve methodological issues (i.e., design of supplemental surveys, choice of exchange rates, inconsistent data,
7. Advocate for more efficiency and timely reporting of data, and for the use of categories and expenditures which allow meaningful aggregation and analysis.

**Addendum 2: Cost Estimates for Bi-Annual Replication of NHA in Suriname, US Dollars**

ITEM	NHA Year			Off Year	
	Rate	Units	Cost	Units	Cost
<b>Personnel</b>					
Project Manager	68	25days	1,705	15days	1,023
Senior Researcher	45	40days	1,818	20days	909
Senior Researcher	45	40days	1,818	20days	909
Research Assistant	34	45days	1,534	10days	341
Research Assistant	34	45days	1,534	10days	341
Research Assistant	34	45days	1,534	10days	341
Administrative support	23	25days	568	15days	341
<b>Total Personnel</b>			<b>10,511</b>		<b>4,205</b>
<b>Training &amp; Staff Development</b>					
Regional training for team leader	5,000	1 event	5,000		
Orientation for team members	500	1 events	500		
<b>Total Training &amp; Staff Development</b>			<b>5,500</b>		<b>0</b>
<b>Meetings &amp; Conferences</b>					
Annual launch	2,000	1 event	2,000		0
HSR SC update (bi-monthly)	50	6 events	300	4	200
Mid-term	2,000	1 event	2,000		0
Dissemination	2,000	1 event	2,000		0
Misc working meetings (core team)	500	1 total	500	1	500
<b>Total Meetings &amp; Conferences</b>			<b>6,800</b>		<b>700</b>
<b>Other Direct Costs</b>					
Stationery & supplies	1,000	1 amt	1,000	1 amt	500
Photocopying & printing	1,500	1 amt	1,500	1 amt	500
Survey of public and private firms	see notes				
Survey of HH expenditures	see notes				
<b>Total Other Direct Costs</b>			<b>2,500</b>		<b>1,000</b>
<b>TOTAL ANNUAL COSTS</b>			<b>19,811</b>		<b>5,905</b>

The above rough cost estimates were based on the following assumptions:

1. While the NHA would be replicated every other year, a number of design activities would take place in the “off” years.
2. All staff are part-time and seconded from key institutions.
3. Salaries are rough estimates.
4. Add-on surveys for public and private firms and for household expenditures are covered through other funding sources.

## **Addendum 4**

### **Sources of Data and Contacts**

<b>Organization</b>	<b>Contact</b>
Ministry of Health	Mr. Jokhoe, financial staff
Ministry of Social Affairs	Mr. Wagimin, financial department
Ministry of Justice and Police	Mrs. Mathoera, financial dept.
Ministry of Defense	financial department
Staatsziekenfonds	Mr. M. Starke
Private insurance	financial departments of ASSURIA, FATUM, Self Reliance
Foundation & NGO's	Mr. Wezenhagen, Forum NGO - each NGO separately and each embassy
Central Bank of Suriname	Ministry of Finance
Households OOP	
Private firms	Financial department of firm
Hospitals, public and private - psychiatric hospital	Financial dept.
GP private practice	HH study and information of firms, insurance companies, RGD
Medical specialist	HH study, info from firms, insurance companies
Laboratory and imaging diagnostics	HH study, hospitals, insurance companies, firms
Overseas providers	RLA - Staats Zieken Fonds
Dental Services	Foundation JTV, Firms, Insurance companies, Dentists
Ambulatory care services	Hospitals, Insurance companies, HH study
Medical Mission	Medical Mission, DKZ hospital and MOH
Dialyses	Dialyses Center, SZF, Private Insurers, firms
Health Administration	All providers and Ministeries
Education and Training	MOH, COVAB,
Family Planning Centers	Foundation Lobi
Buro Of Public Health(BOG)	Dr. Resida, BOG
Private Pharmacies	Mr. Sewbarath Misser, Chairman Society of Pharmacists