

PN-ABS-906
ISN 90820

Technical Note No. 31

**PILOT TESTS ON COST RECOVERY
IN THE NON-HOSPITAL SECTOR
DATA FROM THE PUBLIC HEALTH
FACILITIES IN NIGER**

**Submitted to:
Republic of Niger
Ministry of Public Health
Department of Research and Programming
and
United States Agency for International
Development/Niamey**

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MAY 1994

HEALTH FINANCING AND SUSTAINABILITY (HFS) PROJECT

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AID Contract No. DPE-5974-Z-00-9026-00

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EXECUTIVE SUMMARY

Since May 1993, the Ministry of Public Health (MSP) has been administering payment for health care at the public health hospital of the Boboye and Say districts under the Pilot Tests Project on Cost Recovery in the Non-Clinical Sector. The goal of these pilot tests is to assess the performance of two methods of paying for health care, so as to identify a payment method for the formulation of a national policy on cost recovery in the non-hospital sector.

The pilot tests focus on the public health facilities of the Boboye, Say, and Illéla districts. An indirect payment method is being tested in the Boboye district. This payment method consists of a district tax surcharge of 200 CFA francs per tax payer, with a co-payment of 50 CFA francs per adult and 25 CFA francs per child under age five for each illness. A direct payment method is being tested in the Say district. This payment method consists of a lump sum payment per illness for each person who uses a health facility; adults pay 200 CFA francs and children under five pay 100 CFA francs. The third district, Illéla, which represents the status quo for the policy of free health care, is serving as the control area for the tests.

The data summarized in this report cover the period from May 1993 to February 1994—the first ten months of the test year. The data describe the performance of cost recovery in terms of its impact on the use of the public health facilities, the continuity of treatment, the amount of medicines used, the amount of receipts taken in from cost recovery, the amount spent on medicines and administration, and the amount recovered for these expenditures on medicines and administration.

During the first ten months of the test year, May 1993 to February 1994, cost recovery has had a varied effect on the number of visits to the health facilities in the two test districts of Boboye and Say. The significance of these findings can be evaluated by comparing them with results for the health facilities of the Illéla district. In Illéla, the control area, services at the public health facilities during the test year, measured by the number of initial visits and return visits,¹ remained at the levels observed during the base year between the months from May 1992 and February 1993. In other words, no major occurrences disrupted the status quo of services at the health facilities during the first ten months of the test year.

After the pilot tests had been put into effect, the use of services at the public health facilities in the Boboye district increased. A greater availability of medicines and the collection of a co-payment for services resulted in a distinct increase in the demand for health services. The number of initial visits between the base period (May 1992 to February 1993) and the test period (May 1993 to February 1994) rose by 39 percent. In other words, the co-payment did not deter patients from visiting the health facilities; they were strongly attracted by the availability of medicines. Furthermore, the availability of medicines improved the management of illnesses and the quality of treatment; the number of return visits to the district's public health facilities increased by 119 percent.

¹ Throughout this report, "initial visit" refers to the first visit to a health facility for a new illness. An "initial visit" is not necessarily a person's first visit ever to the facility. "Return visit" refers to a repeat visit to the facility for the same illness episode.

Results were more varied in the Say test district, where the direct payment method was used. Despite the increased availability of medicines, the number of initial visits decreased slightly at most of the rural dispensaries. In certain months, however, the medical post and medical center registered a distinct increase in their use. The most evident improvement was the regularity of follow-up treatment; most of the district's public health facilities experienced an increase in the number of return visits.

As a result of this heavy demand for services at the public health facilities in the test districts, a large quantity of medicines was used. On the whole, the two medical centers each used more than 1 million CFA francs worth of medicines per month. In the Say district, the eight public health facilities used 12.7 million CFA francs worth of medicines over the ten-month period from May 1993 to February 1994—more than twice the annual allocation for medicines in the country's budget, which is about 6 million CFA francs. In the Boboye district, the medicines used in the ten public health facilities between May 1993 and February 1994 amounted to 11 million CFA francs. The value of the medicines over the ten months of cost recovery is two and a half times the annual allocation for medicines in the country's budget, which is about 4.5 million CFA francs.

A large portion of the medicines used under the pilot tests are generic medicines supplied by the project: in other words, the monthly usage of medicines in the two test districts indicates that the country's current allocations for medicines to the medical districts is far below the amount needed.

The average amount spent on medicines varied widely from one district to the other and from one health facility to another. This trend partly reflects unequal proficiency in the use of the diagnostic and treatment protocols. In the Boboye district, which has been using the strategies for several years, the amount spent on medicines per illness averaged from 90 to 140 CFA francs between May 1993 and February 1994, depending on the month. In the Say district, however, where the protocols were introduced the year that the pilot tests were instituted, the average amount spent on medicines per illness reached 200 to 330 CFA francs between May 1993 and February 1994, depending on the month. In the Boboye district, the average amounts spent on medicines were similar across the board, from the medical center to the rural dispensaries. In the Say district, however, the cost of medicines used to provide services was higher at the rural dispensaries than at the medical post during the first five months.

In monetary terms, antibiotics and antiparasitic drugs were the main medicines used to provide care in the two medical districts during the ten months from May 1993 to February 1994. In fact, antibiotics and antiparasitic drugs account for nearly 75 percent of the amount spent on medicines in the two medical districts. The cost of medicines to provide care and the extent to which the health system can provide the basic funds will essentially depend on the price of these two types of medicines and on the extent to which the care-providers develop proficiency in the diagnostic and treatment protocols.

The direct payment method has generated 8 million CFA francs during the test year in the Say district. On the basis of an estimated 210,000 inhabitants, this amounts to a contribution from the public of 38 CFA francs per person. In the Boboye district, the indirect payment method has provided an additional 19.5 million CFA francs, of which 15 million CFA francs were from the local tax surcharge and 4.5 million CFA francs were from the co-payment from users of the public health facilities. On the basis of an estimated population of 250,000, this amounts to a contribution from the public of 78 CFA francs per person—60 CFA francs per person from the tax surcharge, and 18 CFA francs per person from the co-payment.

Thus, from the standpoint of generating revenue, the data from the first ten months of the pilot tests indicate that the indirect payment method is performing at twice the rate of the direct payment method.

The different payment methods and the exemption system used in the tests raise issues of equity. Distance from the health facilities serves as a way of rationing the care received. Those who live in a town where a health facility is located are the principal users. Thus, under the indirect payment method, those who live far from a health facility are penalized. In paying a district tax surcharge, they are paying for the health care that others—the residents of the town where a facility is located—will benefit from the most. Under the two methods of payment, students, persons in the military, and prisoners used their exemptions more than the indigent. The provision of care for students and persons in the military is an issue that should be examined, as exemptions for these groups are costly, especially under the direct payment method.

The revenue from the tax surcharge combined with the receipts from the co-payments, on the one hand, and greater proficiency in the use of the diagnostic and treatment protocols, on the other hand, have enabled the Boboye medical district to achieve a 120-180 percent cost recovery rate for medicines, depending on the month. Receipts from the lump sum payment per illness, however, have recovered between 50 to 55 percent of the costs for medicines in the Say district. Receipts from the tax surcharge and the co-payment covered 75 to 105 percent of the amount spent on medicines and incremental administrative costs incurred by cost recovery and by improvements in the management of the health facilities in the Boboye district. In the Say district, however, receipts covered 30 to 40 percent of the amount spent on medicines and administrative costs.

1.0 INTRODUCTION

1.1 GENERAL FRAMEWORK

The Kollo seminar in 1989, which marked the start of the pilot tests, defined the criteria for evaluating the performance of cost recovery.² The evaluation criteria identified at the seminar reflect a general concern for establishing a new system at the local level for financing and managing medicines; the system should be viable, efficient, and equitable. The evaluation should lead to conclusions and recommendations on the type of health care payment method most suited to conditions in the Republic of Niger, so as to ensure sustainable participation of the public in financing improvements in the quality of health care.

The new system being tested for financing and managing non-hospital care focuses on the health facilities. It consists of three main components. The goal of the first component is to make effective use of available resources and to improve the efficiency of the services provided at the health facilities through the systematic application of diagnostic and treatment protocols and the use of generic brands for the essential medicines dispensed in providing services. By implementing this first component effectively, the cost of medicines in delivering primary health care should be reduced.

The goal of the second component is to improve management capabilities at the health facilities and to promote the involvement of the local populations—those benefitting from the health care services—in the management of the health facilities. A system for financial management and for managing the supplies of medicines has been set up at each health facility. The management system includes the establishment of a local health committee for each health facility. The committees will ensure that there is external control in the management of the health facilities.

The goal of the final component is to mobilize resources at the local level by having the public participate in paying for pharmaceuticals. Two payment methods are being tested in this regard. The first is a direct payment method, whereby each adult who uses the health services pays a lump sum fee per illness of 200 CFA francs (100 CFA francs per child). The second is an indirect payment method, whereby tax payers contribute 200 CFA francs per year, and health care users contribute a co-payment of 50 CFA francs per adult (25 CFA francs per child) for each illness. The indirect payment method is being tested in the Boboye district; the direct payment method is being tested in the Say district.

The instruments for evaluating the pilot tests include two household surveys, a baseline survey taken before the start of cost recovery, and a final survey taken six months after the start of cost recovery. The evaluation also includes the collection of data on activities, on the amount of medicines used and on receipts at the health facilities, as well as data on incremental administrative costs resulting from cost recovery.

The Ministry of Public Health (MSP) began implementing the pilot tests in April 1992. An office at the central level—the Central Monitoring Bureau (BCS)—was established to monitor and implement the pilot tests. The BCS is under the administration of the Department of

² Ministry of Public Health. (1989). *Workshop Seminar on Cost Recovery in the Health Sector*. Department of Research and Programming. Niamey: November.

Research and Programming. A steering committee formulates the policies pertaining to the pilot tests. The committee consists of representatives from the MSP, the Ministry of Finances and Planning, the Ministry of the Interior, and foreign sponsors.

Between October 1992 and April 1993, the baseline survey, the training of nurses in the diagnostic and treatment protocols, management training for personnel at the health facilities, the establishment of the local health committees, and the procurement of medicines were completed. During May 1993, all the medical centers, medical posts, and rural dispensaries in the Boboye and Say districts instituted payment for health care after the project set up the initial supplies of essential generic medicines.

1.2 OBJECTIVES AND ORGANIZATION OF THIS REPORT

The objective of this report is to provide quantitative information on the performance of cost recovery at the medical district and health facility level in the Boboye and Say test districts during the first ten months of the test year.

The specific objectives of this report are:

1. To provide a quantitative summary of the progress of activities at the health facilities following the introduction of cost recovery;
2. To provide information on the quantity of medicines used and the amounts spent for them, as well as the amounts spent on administration at the health facilities; and
3. To provide information on the amount of receipts from cost recovery at the health facilities.

The remainder of this report is divided into five parts. The first part covers trends in the use of the public health facilities. The second part concerns the amount of medicines used. The third part deals with the ability of the two payment methods to generate revenue. The fourth part covers spending on medicines and incremental administrative costs from cost recovery. Finally, the fifth part summarizes how cost recovery has performed.

Tables in the annex provide statistics on various aspects of the health facilities' performance discussed in the report.

2.0 USE OF THE HEALTH FACILITIES

Two factors were analyzed to determine the use of the health facilities: the number of initial patient visits for new illness episodes and the number of return visits for the treatment of illnesses.³ Trends in the number of initial visits will indicate the net effect that the increased availability of medicines has had on the quality of health care and the net effect that payment for treatment has had on the use of public health care services. In other words, this indicator will determine the accessibility of improved health care under cost recovery and the extent to which the health care services are meeting the public's needs.

On a different vein, the number of return visits for a single illness episode will indicate the continuity of the care received by patients. This indicator no doubt reflects the extent to which the public is satisfied with the services it receives and the quality of the treatment provided.

Trends in the number of visits are analyzed over time and by area. The analysis of variations over time consists of determining for a given district variations in the number of visits to the health facilities between the year prior to the institution of payment for health care, hereafter called the base year (May 1992 to April 1993), and the year during which the tests were conducted, hereafter called the test year (May 1993 to April 1994). This analysis over time is broken down by month, to take into account seasonal variations in the use of the health facilities.

For the analysis by area, variations in the use of the health facilities are compared across the three districts: Boboye (indirect payment), Say (direct payment), and Illéla (control area). Finally, within each district, variations are compared among the various types of health facilities, i.e., the medical center, medical post, and rural dispensaries.

2.1 INITIAL VISITS FOR NEW EPISODES OF ILLNESS

Figures 2.1a, 2.1b, and 2.1c show changes in the number of initial patient visits between the base year and the test year in the Illéla, Say, and Boboye medical districts, respectively. From May to February 1992, during the base year, the number of initial visits to public health facilities in the Illéla medical district for the treatment of an illness reached 36,000. During the same months of the test year, the number of initial visits reached 34,000—a relative decrease of 5 percent. The monthly change in the number of new clients seeking treatment for an illness varied between -25 percent (in October) and +14 percent (in February).

³ Throughout this report, "initial visit" refers to the first visit to a health facility for a new illness. An "initial visit" is not necessarily a person's first visit ever to the facility. "Return visit" refers to a repeat visit to the facility for the same illness episode.

Figure 2.1a
 NUMBER OF INITIAL VISITS PER MONTH FOR THE TREATMENT OF ILLNESSES:
 BEFORE AND DURING THE PILOT TESTS - ILLÉLA MEDICAL DISTRICT (CONTROL)

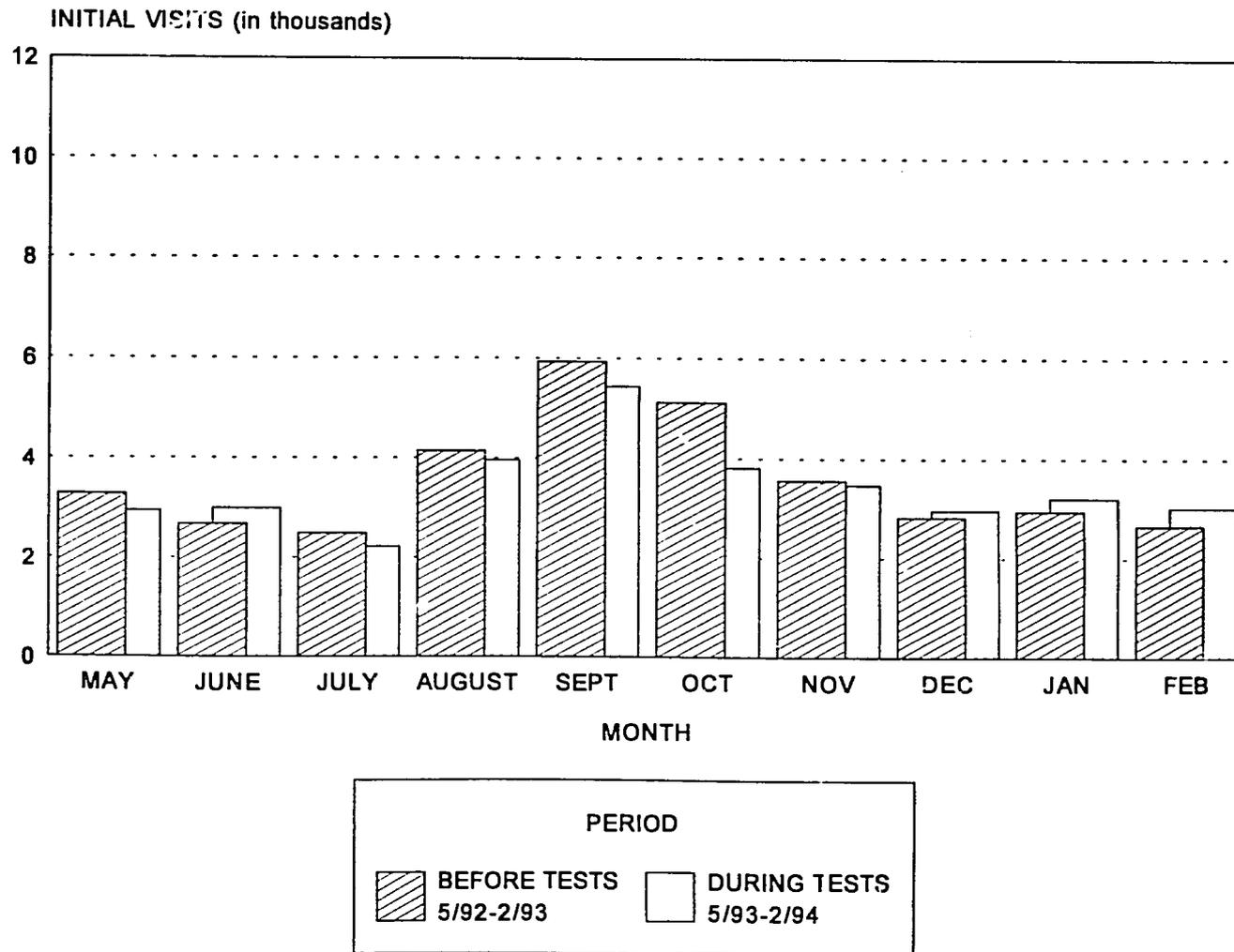


Figure 2.1b
 NUMBER OF INITIAL VISITS PER MONTH FOR THE TREATMENT OF ILLNESSES:
 BEFORE AND DURING THE PILOT TEST - SAY MEDICAL DISTRICT (DIRECT PAYMENT)

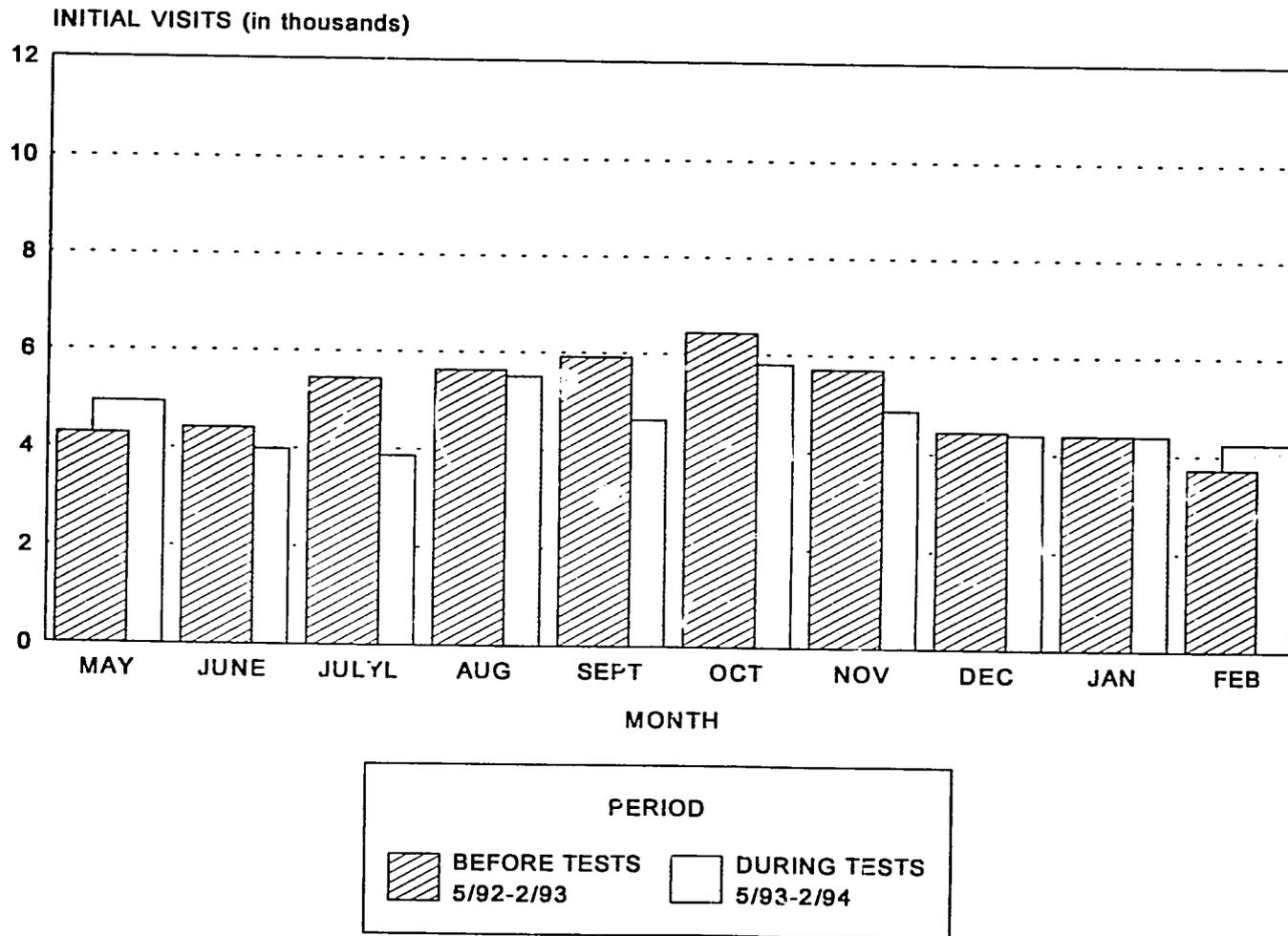
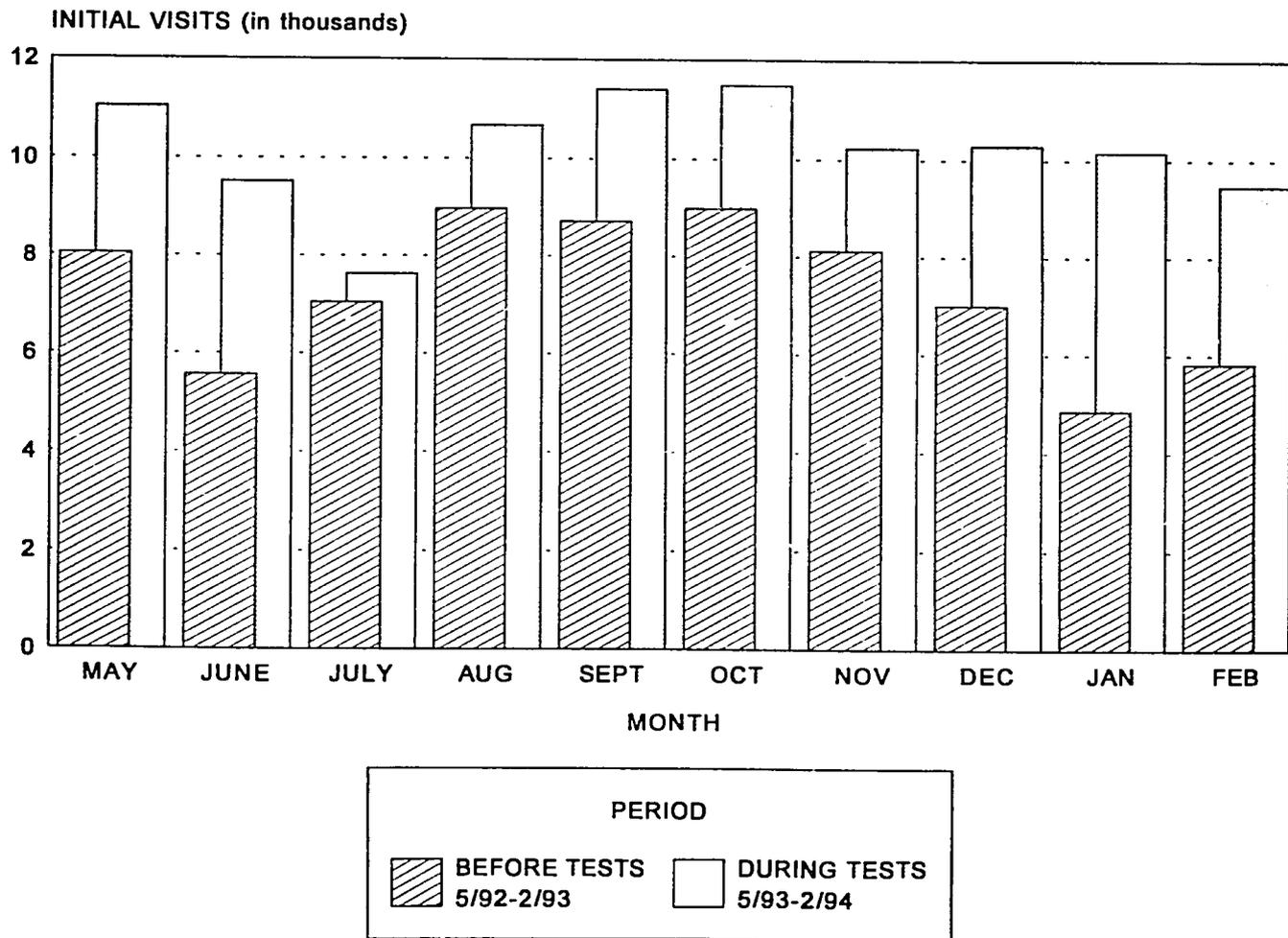


Figure 2.1c
 NUMBER OF INITIAL VISITS PER MONTH FOR THE TREATMENT OF ILLNESSES:
 BOBOYE MEDICAL DISTRICT (INDIRECT PAYMENT)



In the Say medical district, the number of initial visits for an illness episode went from 50,000 during the base year period to 47,000 during the test year period—a decrease of 8 percent. In terms of the change in the number of initial visits between the two periods, the Say medical district, which used the direct payment method, showed results similar to Illéla, the control medical district.

In the Boboye medical district, the number of initial visits for an illness episode rose from 73,000 during the base year period to 102,000 during the test year period—an increase of 39 percent. The number of initial visits monthly has been on the rise since August. In fact, in January and February, the increase in the number of initial visits was more than 60 percent.

Changes in the number of initial visits per month are summarized for the three districts in *Figure 2.1d*. In terms of the difference between the base year period and the test year period in the number of initial visits, the figures for the Boboye medical district, which used the indirect payment method, were markedly different than those in the Illéla and Say medical districts. In other words, the increased availability of medicines at the public health facilities of the Boboye and Say test districts attracted the populations of the two districts. However, in relation to the results for the Boboye district, where the co-payment paid by patients is low, the direct payment of 200 CFA francs per illness in effect rationed access to services at the public health facilities in the Say test district. This was in addition to the quantitative rationing of care caused by physical distance to these health facilities. In the Boboye district, where the co-payment is relatively low, the availability of medicines had a greater effect on the population and led to an increase in the number of new clients.

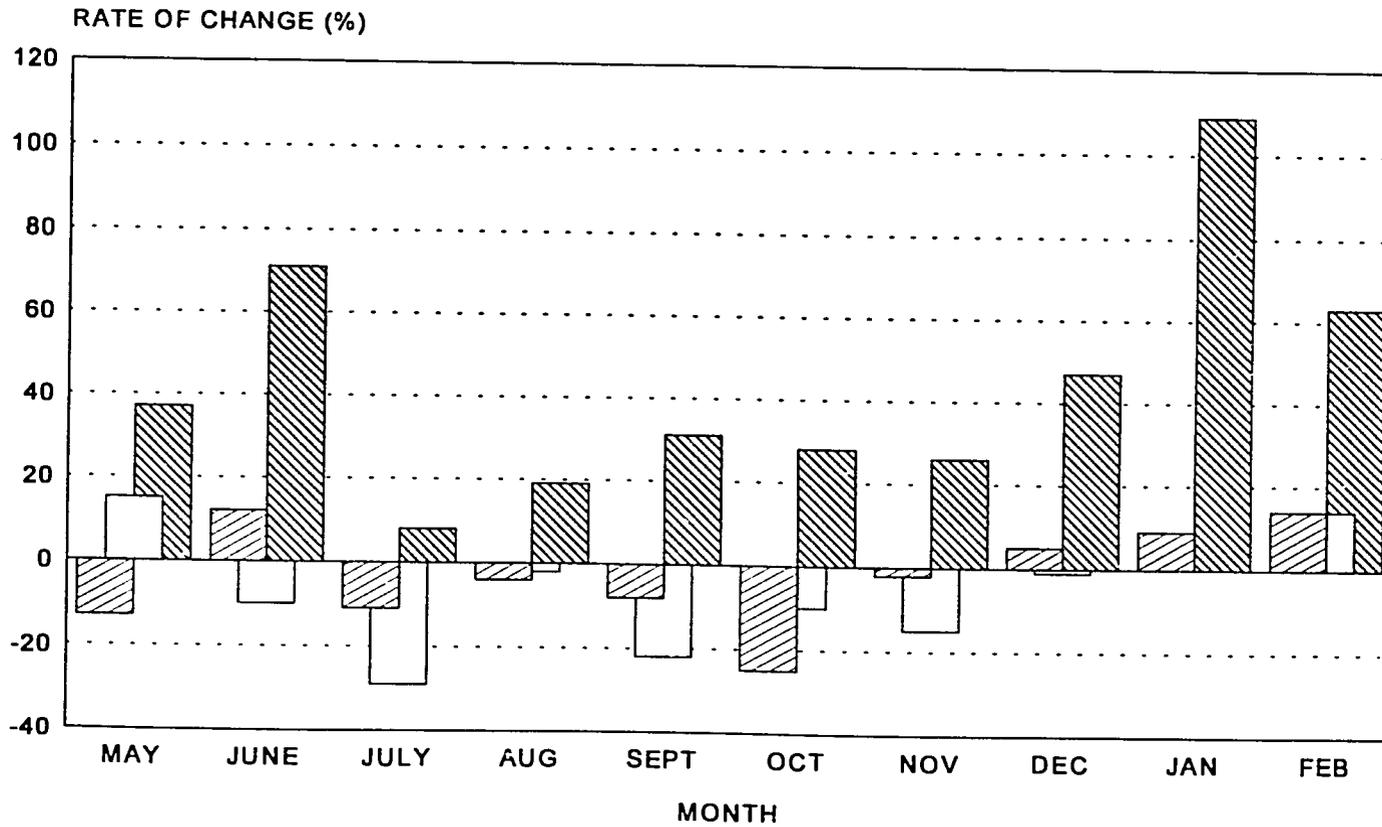
2.2 THE CONTINUITY OF CARE: RETURN VISITS

Figures 2.2a, 2.2b, and 2.2c show the trends in the number of return visits between the base year and the test year in the Illéla, Say, and Boboye medical districts respectively.

In the Illéla district, the number of return visits from May to February increased slightly between the base year and the test year periods. During the base year, the number of return visits for the period reached 30,000; they reached 34,000 during the test year—an increase of about 14 percent. The average number of visits per patient rose slightly from 1.83 visits during the base year to 2.00 visits during the test year.

Between May and February, the number of return visits for the treatment of illnesses increased markedly in the Say district between the base year and the test year. The number of return visits increased from 41,000 visits during the base year to 59,000 during the test year—a relative increase of 44 percent. The continuity of treatment is evidenced by an increase in the average number of visits. The average number of visits per patient increased from 1.81 during the base year to 2.27 visits during the test year.

Figure 2.1d
 RATE OF CHANGE IN THE NUMBER OF INITIAL VISITS PER MONTH FOR ILLNESS EPISODES
 BEFORE AND DURING THE PILOT TEST BY MEDICAL DISTRICT



MEDICAL DISTRICT

ILLELA - CONTROL
 SAY - DIRECT
 BOBOYE - INDIRECT

Figure 2.2a
NUMBER OF RETURN VISITS PER MONTH FOR ILLNESS EPISODES
BEFORE AND DURING PILOT TEST - ILLÉLA MEDICAL DISTRICT (CONTROL)

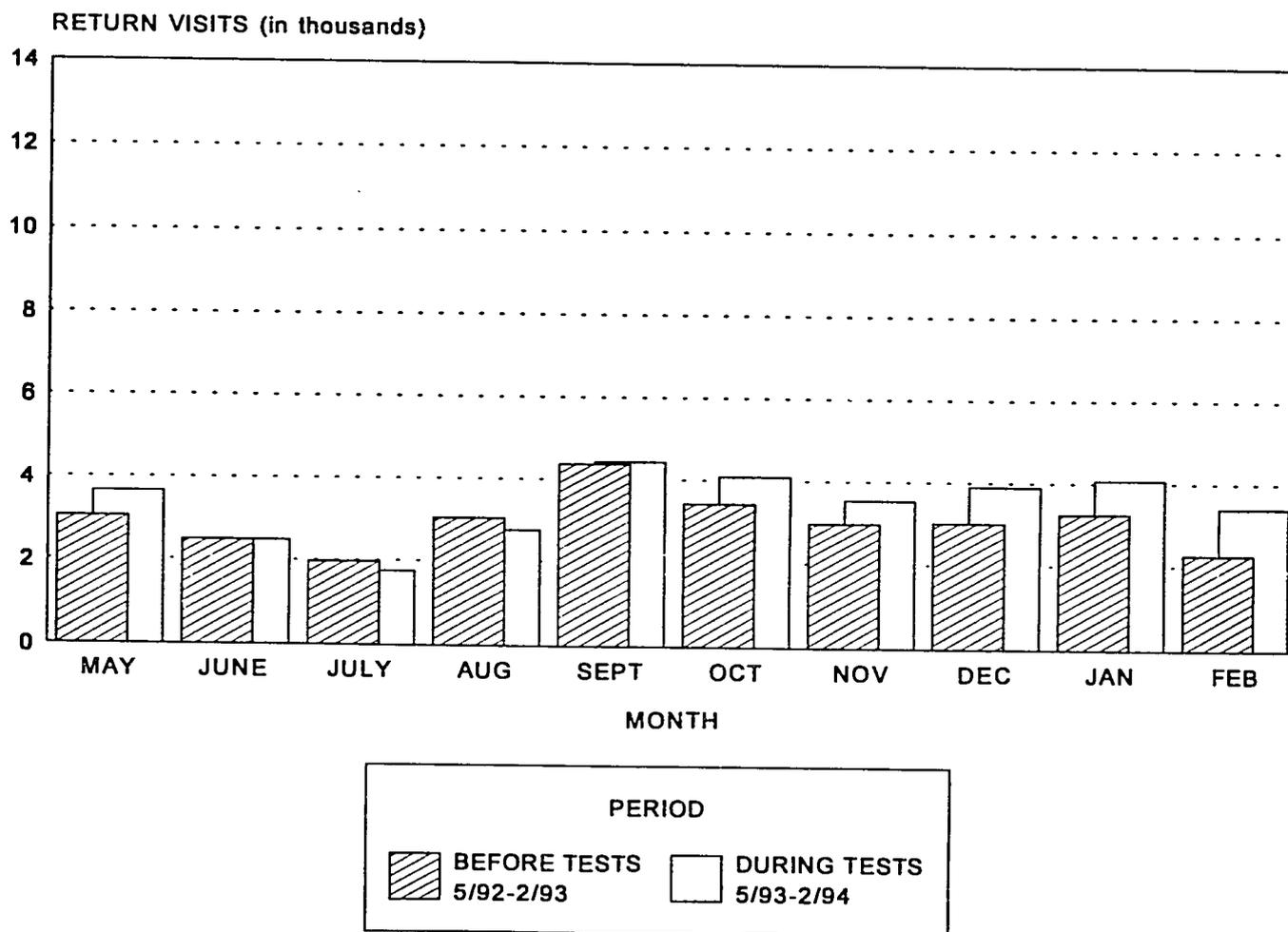


Figure 2.2b
 NUMBER OF RETURN VISITS PER MONTH FOR THE ILLNESS EPISODES
 BEFORE AND DURING PILOT TESTS - SAY MEDICAL DISTRICT (DIRECT PAYMENT)

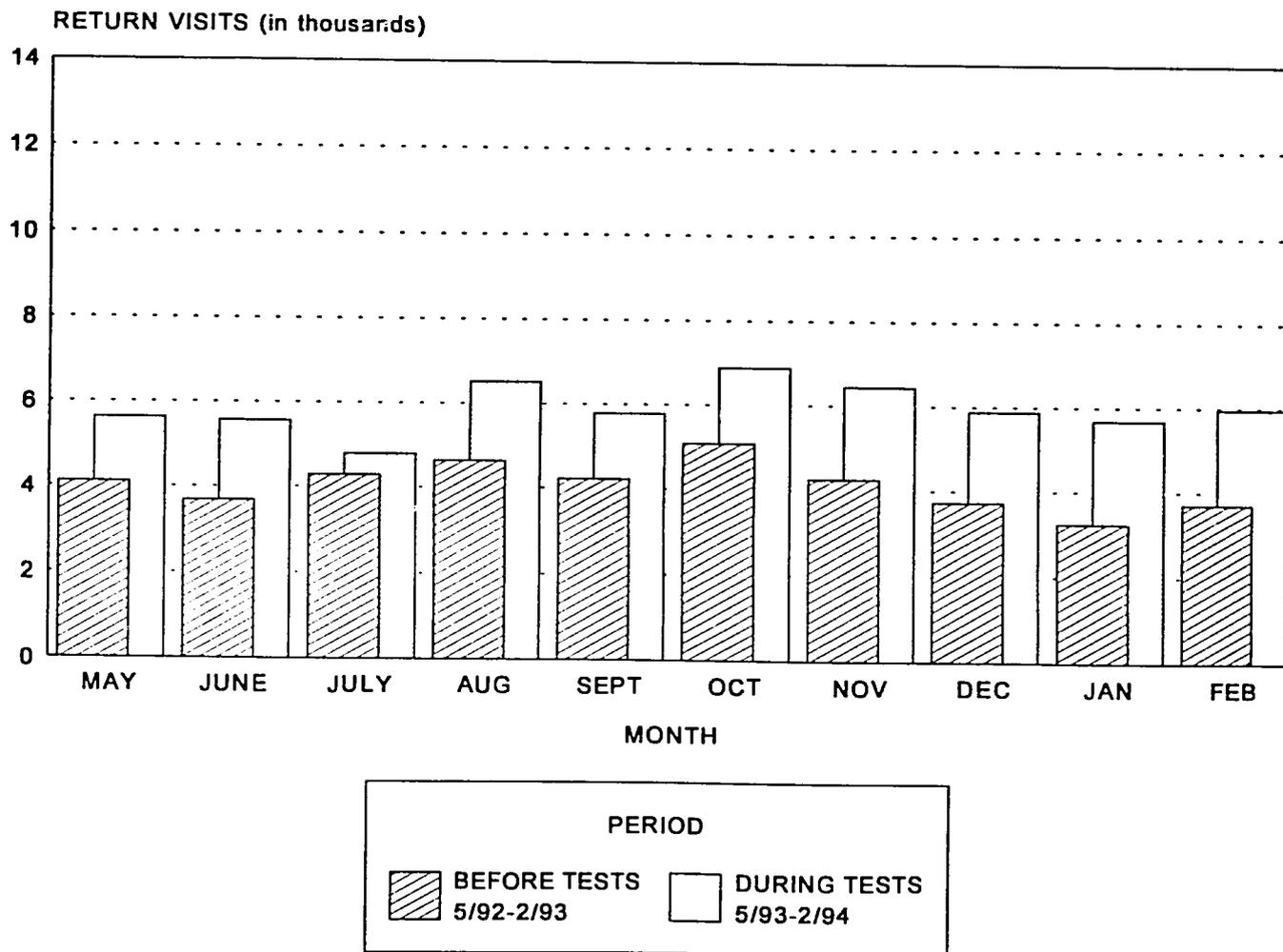
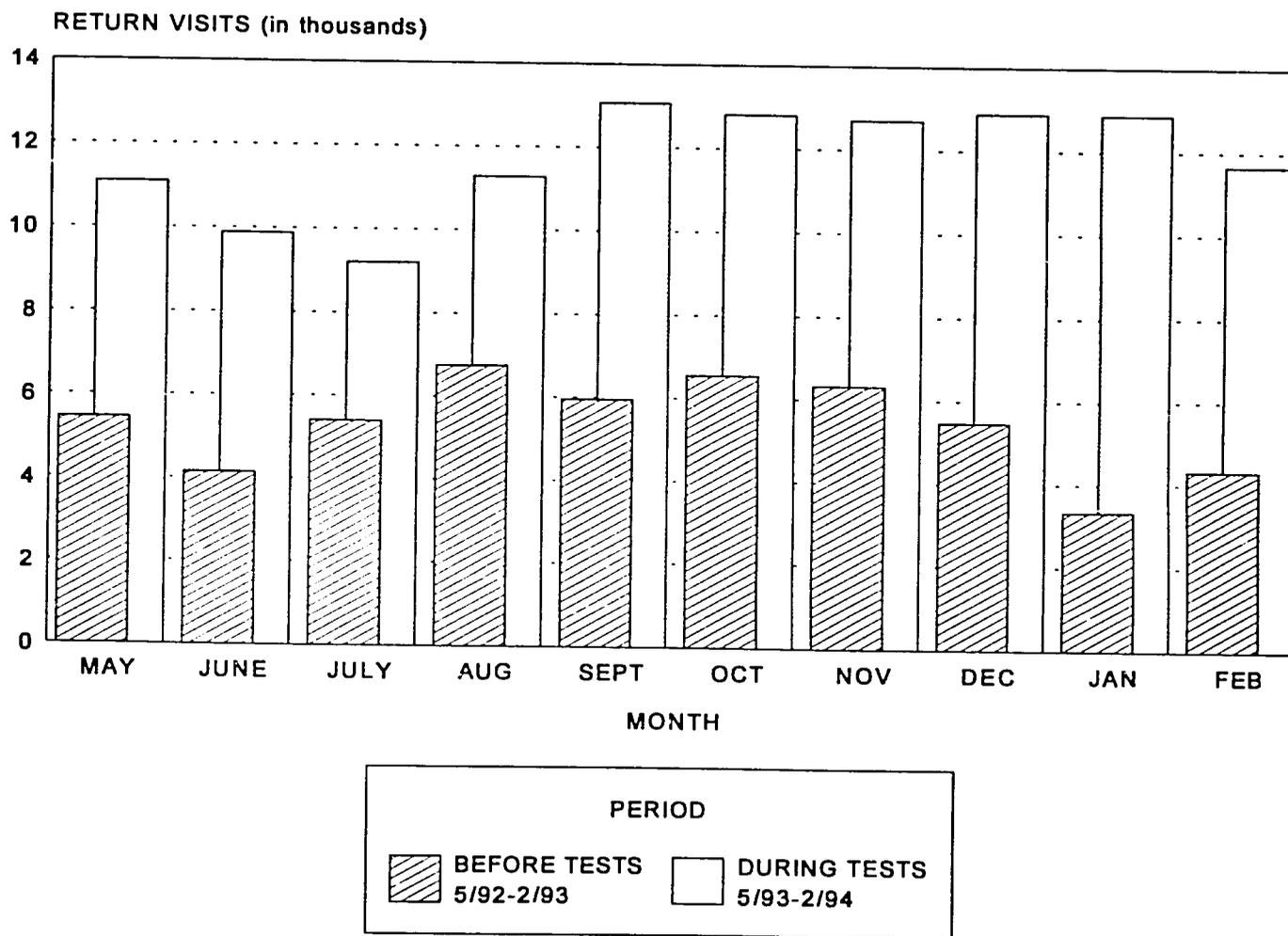


Figure 2.2c
NUMBER OF RETURN VISITS PER MONTH FOR ILLNESS EPISODES
BEFORE AND DURING PILOT TESTS - BOBOYE MEDICAL DISTRICT (INDIRECT PAYMENT)



During the ten-month period, the number of return visits to the public health facilities in the Boboye district rose from 54,000 during the base year to 117,000 during the test year—a relative increase of 119 percent. In other words, the number of return visits more than doubled in the Boboye medical district. This increase in the regularity of follow-up treatment, combined with the increase in new clients, produced a significant increase in curative health care activities at the health facilities. In July and August, the health facilities registered a lower rate of change in the number of visits for the treatment of illnesses. The rate for July reached 35 percent, while the rate for August reached 40 percent. At the other extreme, treatment increased by 100 percent in June and by more than 100 percent in January and February (see *Table A2.2b* in the Annex). Overall, the average number of visits per patient rose from 1.74 during the base year to 2.15 during the test year.

The changes in the number of return visits for the three districts are depicted in *Figure 2.2d*. The rate of change in the number of return visits for the Say district was between the low rate of change for the Illéla district and the high rate of increase for the Boboye district.

In conclusion, to judge from the number of return visits, the availability of medicines improved the continuity of treatment and patient management in the two test districts of Boboye and Say. In the Boboye district, the number of return visits more than doubled between the base year and the test year. In the Say district, the number of return visits increased 44 percent. In Illéla, the control district, the number of return visits showed a slight increase of 14 percent between the base year and the test year.

2.3 VARIATION BY TYPE OF HEALTH FACILITY

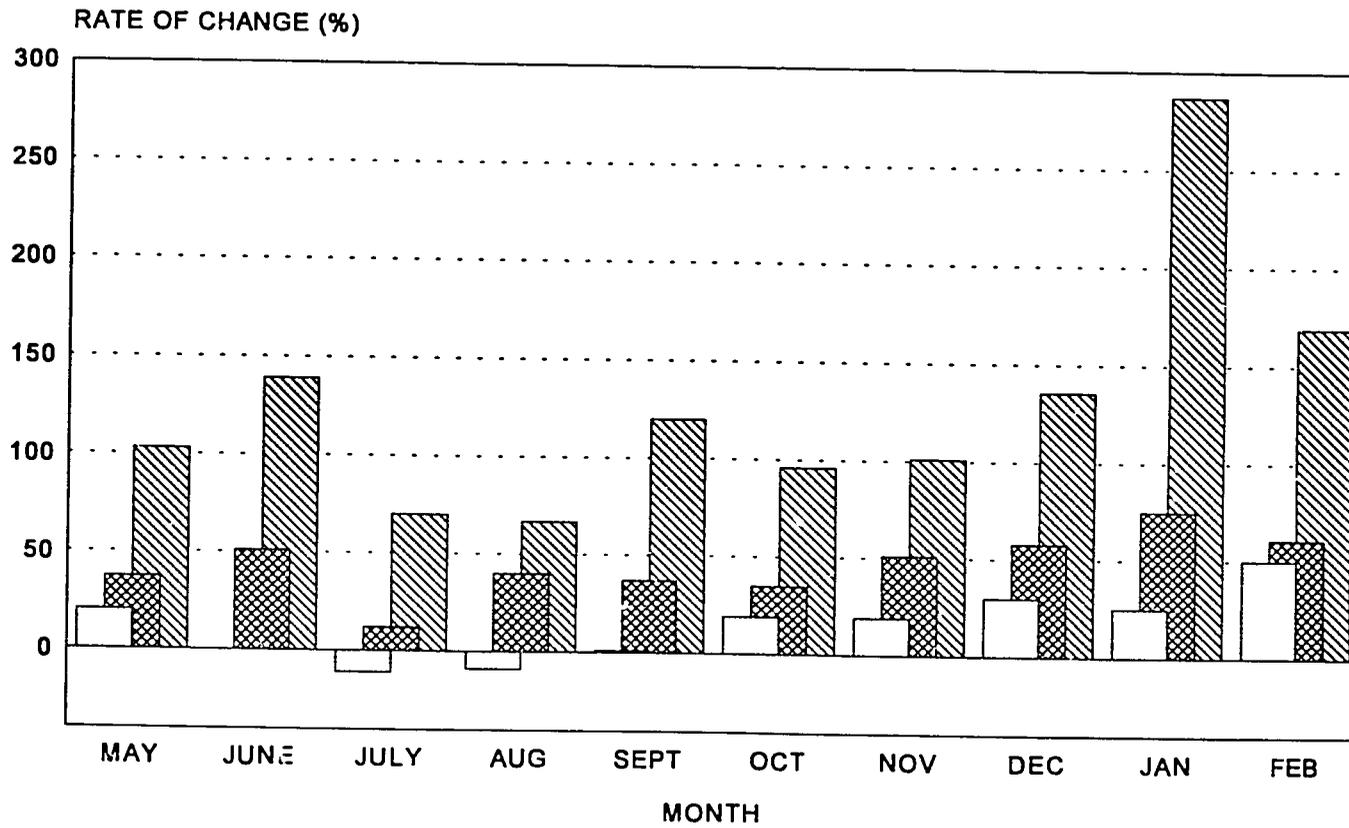
The various types of public health facilities within the same district did not all show the same rate of change or direction of change. *Figure 2.3* depicts the trends in the number of initial visits in the three medical districts according to the type of health facility.

In Illéla, the control district, the decrease in the number of visits to the public health facilities between May and February of the base year and the same period of the test year affected each type of health facility. An increase in the number of initial visits was noted at Illéla's medical center during June and July. In addition, a surge in activities occurred at the rural dispensaries in January and February 1994 (see *Table A2.3a* in the Annex).

In the Say district, the extent to which the availability of medicines and payment for care had a significant effect varied from one type of health facility to another. On the whole, the number of initial visits and the total visits increased significantly at the Torodi medical post during the first seven months of cost recovery. Interruptions in the supply of medicines, which resulted from a large increase in the utilization of medicines (above the regional averages) reduced the attractiveness of the medical post's services in December, January, and February (see *Table A2.3d* in the Annex).

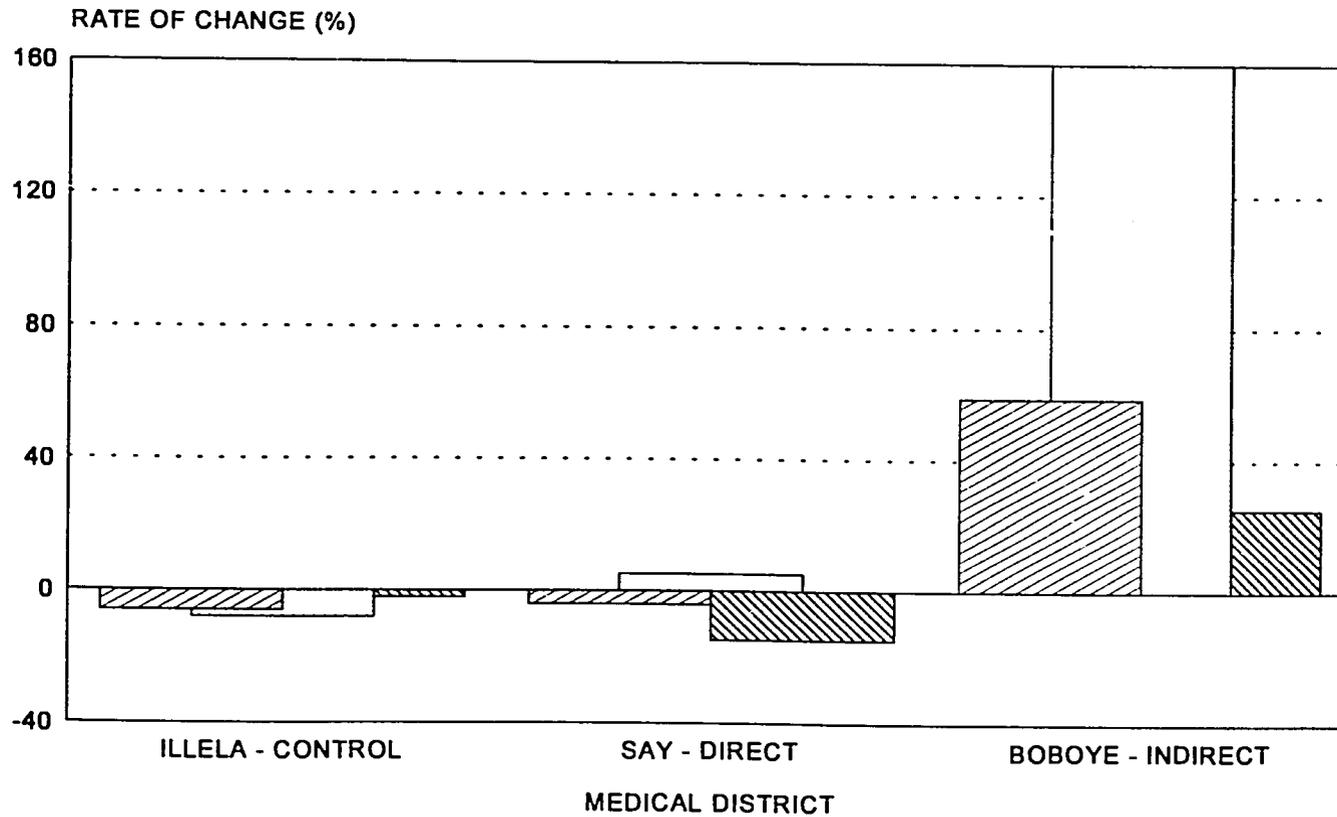
However, a reduction in the use of the public health facilities during the test year in the Say district was more common at the rural dispensaries—for the period from May to February, the number of initial client visits decreased by 15 percent between the base year and the test year. The figures for Say's medical center varied depending on the month; after a slight decrease during the first months of cost recovery, use of the medical center increased noticeably beginning in January (see *Table A2.3d* in the Annex).

Figure 2.2d
 RATE OF CHANGE PER MONTH BETWEEN THE BASE AND TEST YEARS:
 NUMBER OF RETURN VISITS FOR THE ILLNESS EPISODES BY MEDICAL DISTRICT



MEDICAL DISTRICT
 □ ILLELA - CONTROL ▣ SAY - DIRECT ▨ BOBOYE - INDIRECT

Figure 2.3
 RATE OF CHANGE BETWEEN THE BASE AND TEST YEARS IN THE NUMBER OF INITIAL VISITS
 BY TYPE OF HEALTH FACILITY AND MEDICAL DISTRICT: MAY 1993-FEBRUARY 1994



TYPE OF HEALTH FACILITY
 [diagonal lines] MEDICAL CENTER [white] MEDICAL POST [cross-hatched] RURAL DISPENSARIES

In the Boboye district, the largest changes occurred at the Falmey medical post, where the rate of growth in the number of initial visits exceeded 160 percent during the first ten months of the test year. Furthermore, the number of initial visits at the Birni N'Gaouré Medical Center increased 60 percent. At the rural dispensaries, the number of initial visits increased 25 percent. The continuity of care was much more evident at the medical post and rural dispensaries than at the medical center. Overall, the number of visits increased 66 percent at the rural dispensaries. The number of visits tripled at the medical post, and increased 55 percent at the medical center. (See *Tables A2.3g, A2.3h, and A2.3i* in the Annex).

In conclusion, the availability of medicines and the institution of payment for health care has had varied effects on the number of visits to the health facilities depending on the type of health facility. The number of initial visits and the continuity of treatment clearly increased at the medical posts in the test districts. At the rural dispensaries of the Boboye district, the increase in the number of initial visits was lower compared to the increase in the number of initial visits at the district's medical post and medical center. In the Say district, the decrease in the number of initial visits was more extensive and lasted over a longer period of time at the rural dispensaries than at the medical center.

3.0 THE UTILIZATION OF MEDICINES

The description below of the utilization of medicines used to provide services will be confined to the Boboye and Say test districts, where a management system for medicines was introduced. The system enables the monthly usage of medicines to be determined.⁴ The analyses in this report will be limited to a description of the average amount spent on medicines, the variation in such spending between the districts and among the different types of health facilities, and the distribution of the amounts for medicines according to the types of medicine used.

A comparison between the Boboye and Say districts of the amount spent on medicines touches on a particularly interesting issue. The amount of medicines used is strongly affected by the use of the diagnostic and treatment protocols. These protocols have been in practice for several years in the Boboye district. They were recently introduced in the Say district when the pilot tests were instituted. As a result, the Boboye health personnel are more familiar with the diagnostic and treatment protocols than the Say personnel. Thus, the data below help assess the ability of these protocols to reduce the cost of medicines used in providing care.

3.1 AMOUNT OF MEDICINES USED

Table A3.1a in the Annex shows the value of the medicines used each month since the pilot tests were instituted in all of the health facilities within the Boboye and Say medical districts. On the whole, the two medical districts each used more than 1 million CFA francs in medicines per month.

The eight public health facilities in the Say district used medicines amounting to 12.7 million CFA francs during the ten-month period from May 1993 to February 1994. This is twice the amount of the annual allocation for medicines in the country's budget, which is about 6 million CFA francs. The decrease in the monthly use of medicines in December 1993 and January 1994 was due to interruptions in the supply of medicines at the Torodi medical post. This post uses more medicines than any of the other health facilities in the district.

Medicines worth 11 million CFA francs were used in the ten public health facilities in the Boboye district between May 1993 and February 1994. The amount of medicines used during the ten months of cost recovery is two and a half times the annual allocation for medicines in the country's budget, which is around 4.5 million CFA francs.

A large portion of the medicines used for the pilot tests are generic medicines supplied by the project. In other words, the amount of medicines used per month for the two test districts indicates that the government's current allocations for medicines to the medical districts are well below actual needs.

⁴The cost of the medicines used by the public health facilities during the period considered in this report is based on the prices in effect before the CFA franc was devaluated in January 1994. When making projections on the use of medicines from the figures in this section, one should take into account the effect that inflation from the devaluation of the CFA franc will have on medicine prices.

It should be noted that the most decentralized facilities—the rural dispensaries—used a large portion of the medicines. This recent development is much more prevalent in the Boboye district than in the Say district. In fact, the rural dispensaries account for 70 percent of the medicines used in the Boboye medical district, whereas they account for 44 percent of the amount spent on medicines in the Say medical district (see *Tables A3.1b and A3.1c*).

3.2 AVERAGE SPENDING ON MEDICINES

During the first ten months of the pilot tests, the average amount spent on medicines per illness reached 108 CFA francs in the Boboye medical district, compared to 272 CFA francs per illness in the Say medical district.⁵ It is interesting to note that the average amount spent on medicines per month increased in the two medical districts during June, July, and August. These are months when the number of initial visits showed a relative decrease, which not only affected the nature of the illnesses treated, but even more so the severity of the illnesses among the patients who visited the health facilities (see *Figure 3.2*). It can be said that as access to the public health facilities becomes more difficult, the percentage of serious illnesses among the case load increases. The differences in the average amounts spent on medicines per illness between Boboye and Say are most likely related to two factors.

The first factor is proficiency in the diagnostic and treatment protocols. The personnel at the Boboye health facilities are more proficient in using the protocols than the Say personnel, who have been using them for only a few months. This delay in using the protocols accounts in part for the greater use of injections in the Say district compared to the Boboye district, as will be seen later. Moreover, during the same period, the types of medicines used at the health facilities in Boboye were less varied than those used at the health facilities in Say.

The second factor has to do with the severity of the illnesses in the client case load. As we noted above, the use of the health facilities increased heavily in the Boboye district. According to the health care personnel at the district's health facilities, a large majority of these new clients came to the health facilities with minor illnesses. Because of the 200 CFA franc limit in the Say district, however, clients took the severity of their illnesses into account, which resulted in a relatively large number of serious cases in the Say district compared to the Boboye district. A similar situation occurred when the rates were increased in Tibiri and patients sought treatment according to the severity of their illnesses.

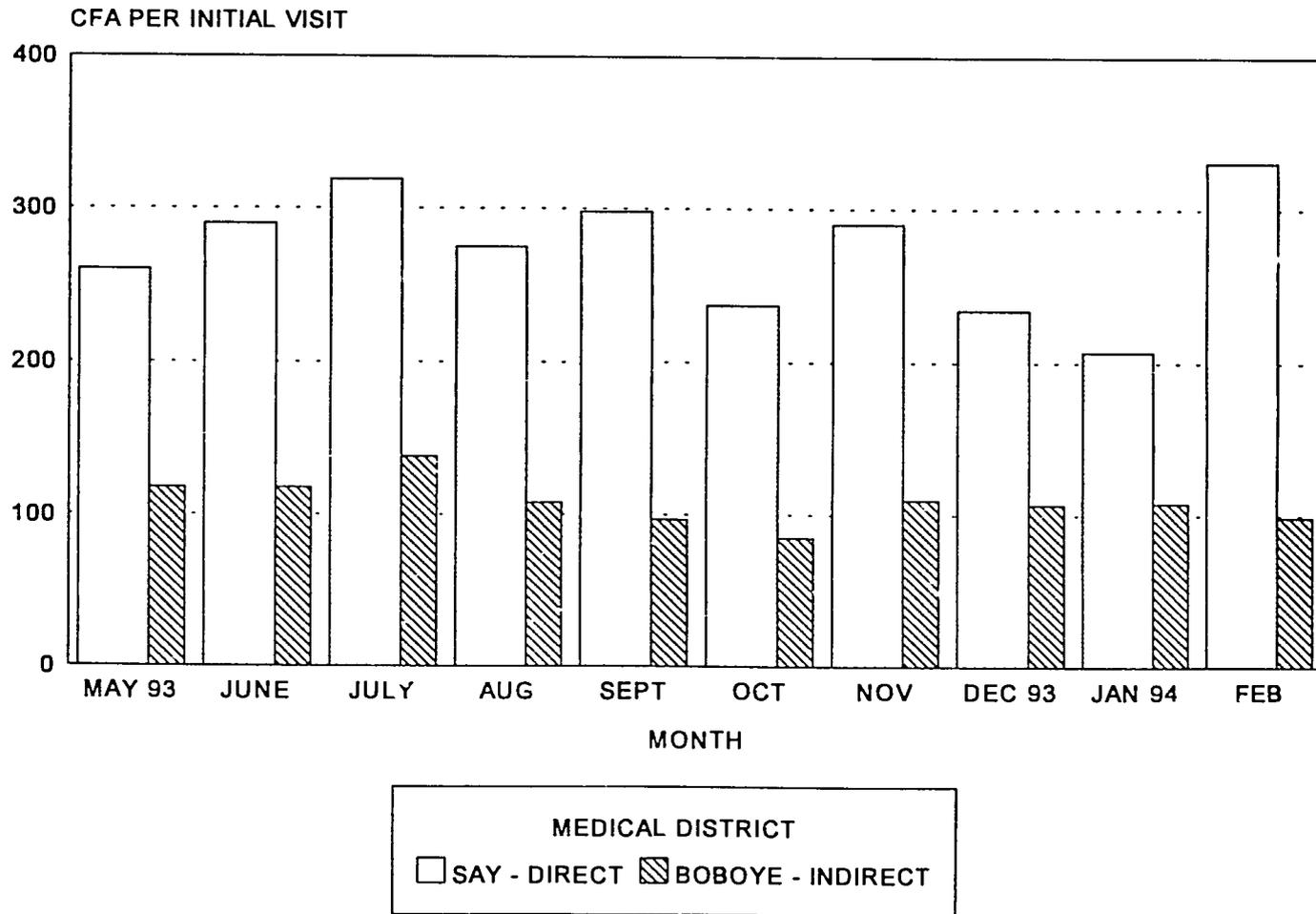
⁵During the same months from May 1989 to February 1990, the average amount spent on medicines for each new client reached 333 CFA francs at the Tibiri medical post, where cost recovery was being tested. The average amount spent increased during the months of November to January in relation to the level observed during the prior months, which was between 175 and 300 CFA francs. It appears that strict application of the diagnostic and treatment protocols can reduce the cost of treatment to the level of 100-150 CFA francs per treatment.

Sources:

RESSFOP Project (1992). *Financement des Médicaments par la Population: Expérience de Tibiri, Dosso — Bilan Final* [When the People Pay for their Medicines: the Experiment at Tibiri, Dosso—Final Assessment]. Republic of Niger, Ministry of Public Health, Coopération Nigero-Belge. (May)

Sekou, Hamidou *et al.* (1991). *Analyse des Aspects du Recouvrement des coûts des Médicaments lors de la Recherche Opérationnelle à Tibiri et du Projet de Mirriah* [Aspects of Cost Recovery for Medicines: An Analysis Conducted during Operations Research at Tibiri and the Mirriah Project]. Republic of Niger, Ministry of Public Health, Department of Research and Programming. (May)

Figure 3.2
 AVERAGE PER INITIAL CLIENT VISIT SPENT ON MEDICINES TO TREAT ILLNESSES
 DURING THE TEST YEAR BY MEDICAL DISTRICT (CFA F)



3.3 VARIATION BY TYPE OF HEALTH FACILITY

.. *Figures 3.3a, 3.3b, and 3.3c* summarize the average monthly spending on medicines by type of health facility in the two test districts. In general, the differences noted at the medical district level also occurred at the individual levels.

Differences between the medical centers were much less evident during the first four months. They tended to become more pronounced during the period from September to December with the increase in the average amount of medicines used at the Say medical center, which resulted from the heavy use of injections to treat malaria (see *Figure 3.3a*).

The Torodi medical post has used medicines heavily since the tests were instituted. In fact, it used nearly three times more medicines for each initial visit than the Falmey medical post (see *Figure 3.3b*). As a result, the supply of several medicines was interrupted during December and January. The medical post's heavy use of medicines resumed in February. In addition to its lack of proficiency in using the diagnostic and treatment protocols among staff, which is widespread in the Say medical district, the Torodi medical post is a typical example of a health facility where its medical supplies are poorly managed.

The value of the medicines used per illness at the rural dispensaries in the Say district was twice that used at the health facilities of the same level of technical expertise in the Boboye district (see *Figure 3.3c*). During August and September, when the disparity was at its worst, the rural dispensaries in the Say district used three (3) times the value of medicines per illness than their counterparts in the Boboye district. As of October, however, following supervisory visits from the chief physician, the average amount used for each initial visit lowered among the rural dispensaries in the Say district.

In general, the average amounts spent on medicines per illness in the Boboye district were similar regardless of the type of health facility: from the medical center to the rural dispensary, the amounts spent were of the same order of magnitude. In the Say district, however, the average amount that the peripheral health facilities spent per illness was high during the first five months, but then tended toward the relatively low levels observed at the medical center.

In conclusion, the value of medicines used in the health facilities of the two test districts was between 1 to 1.5 million CFA francs per month during the first ten months of the pilot tests. In the Boboye district, where the diagnostic and treatment protocols are relatively well-established, the heavy use of medicines was basically due to the strong increase in the number of cases treated at the health facilities. In the Say district, however, where the use of the protocols began at the same time that the pilot tests project was instituted, the use of medicines could not be kept at the relatively low levels observed in Boboye. As the data on the use of the health facilities indicate, the payment of 200 CFA francs per illness deterred some clients from using the health facilities. Thus, the high number of patients with more serious illnesses compared to patients in the Boboye district required the Say district to spend a relatively high amount on medicines.

Figure 3.3a
AVERAGE PER INITIAL VISIT SPENT ON MEDICINES TO TREAT ILLNESSES
DURING THE TEST YEAR AT MEDICAL CENTERS (CFA Francs)

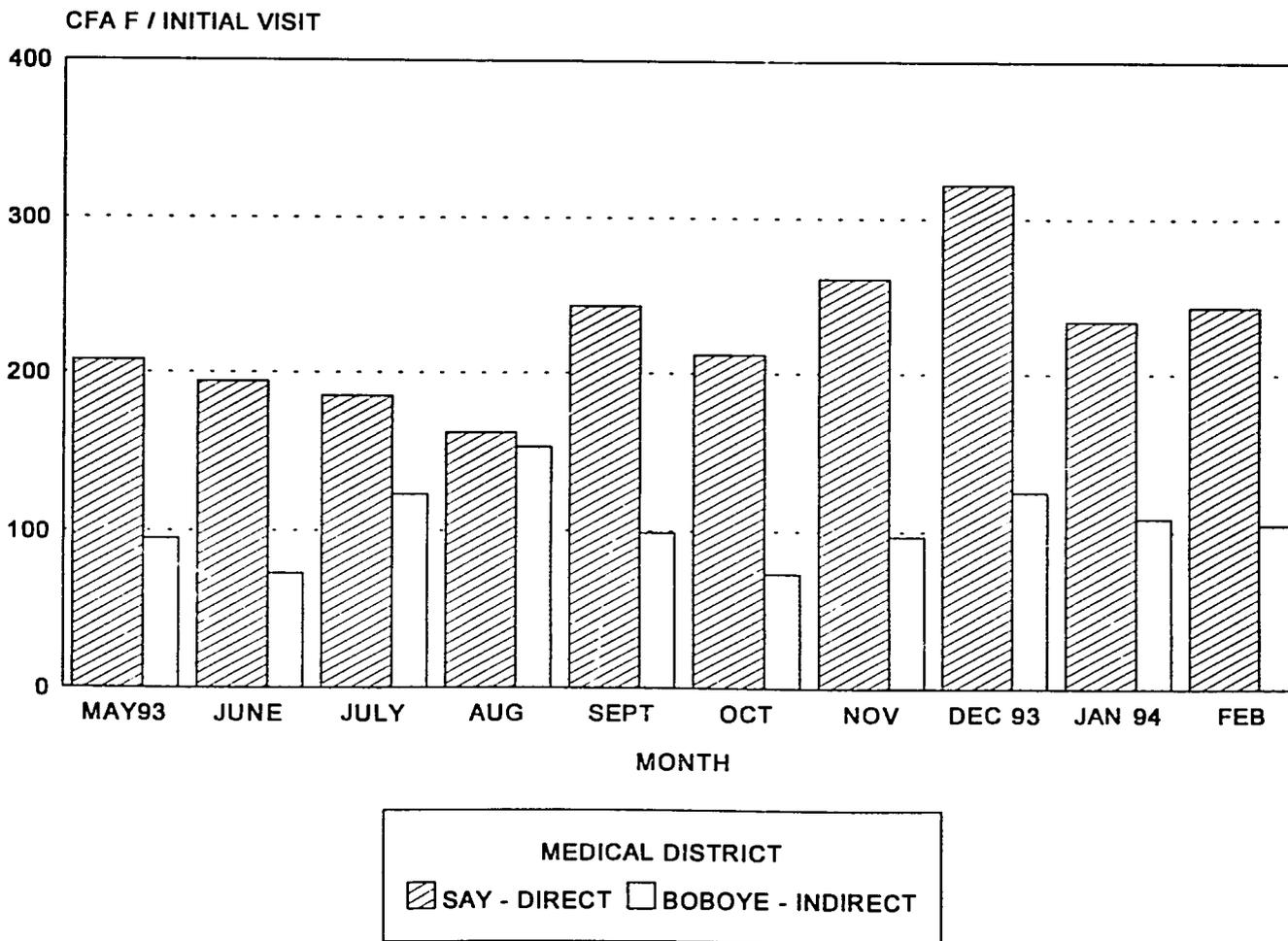


Figure 3.3b
 AVERAGE PER INITIAL VISIT SPENT ON MEDICINES TO TREAT ILLNESSES
 DURING THE TEST YEAR AT MEDICAL POSTS: (CFA F)

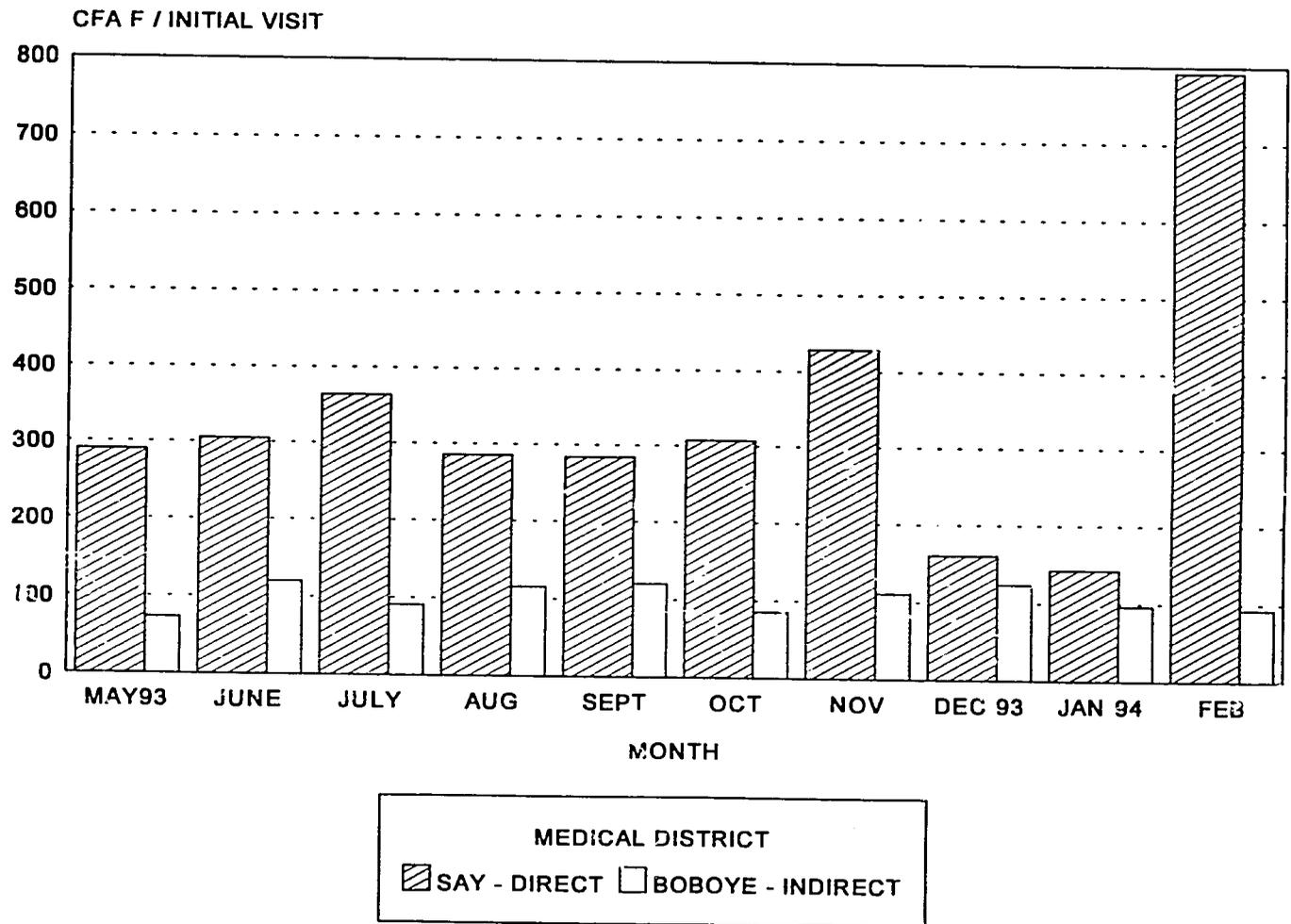
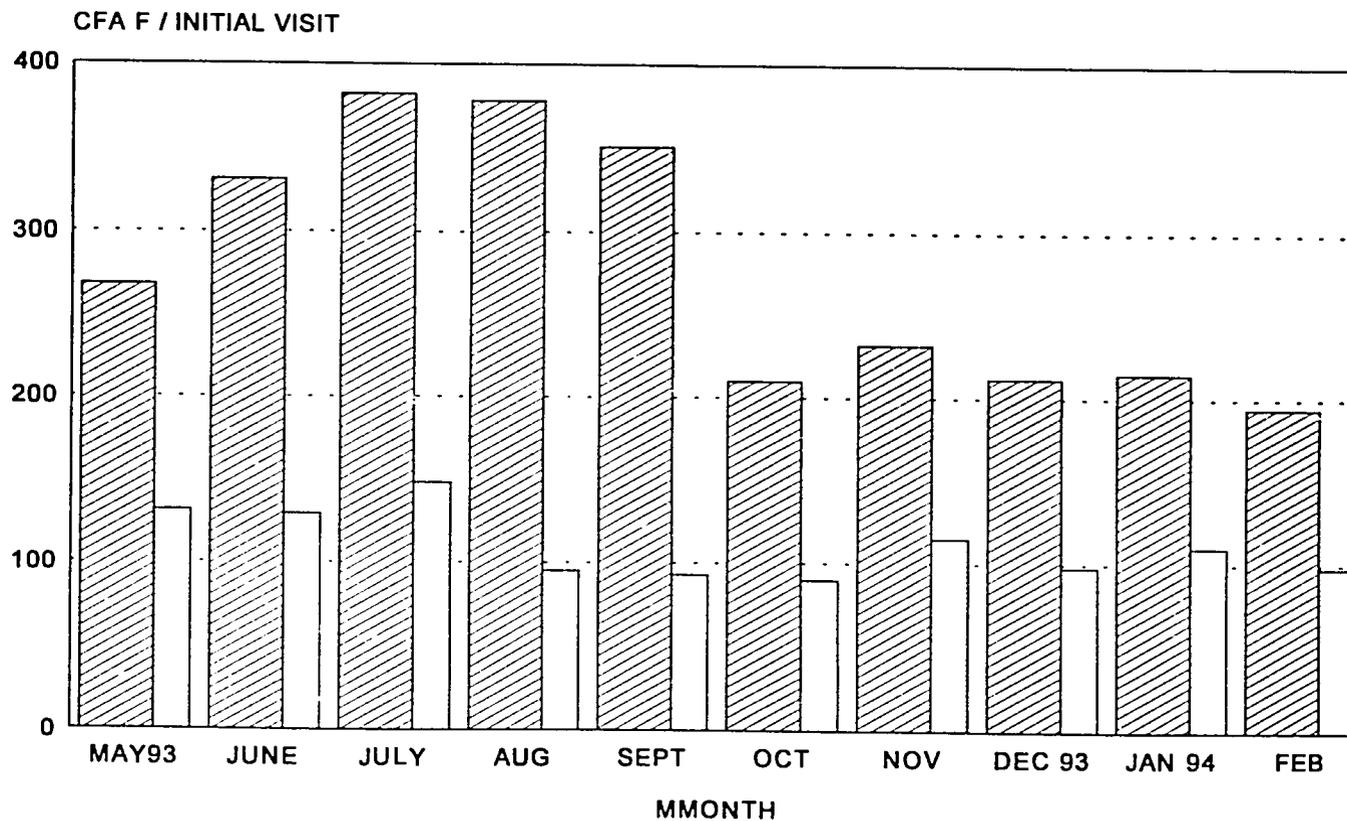


Figure 3.3c
AVERAGE PER INITIAL VISIT SPENT ON MEDICINES TO TREAT ILLNESSES
DURING THE TEST YEAR AT RURAL DISPENSARIES



MEDICAL DISTRICT
 ▨ SAY - DIRECT □ BOBOYE - INDIRECT

3.4 TYPES OF MEDICINES USED

.. *Figures 3.4a and 3.4b* show the breakdown of expenditures on medicines by the type of medicine in the Say and Boboye districts, respectively. During the period from May 1993 to February 1994, antibiotics and antiparasitic drugs accounted for the largest amounts spent on medicines to provide care in the two medical districts.

In the Say medical district, about 5.7 million CFA francs worth of antibiotics were used by the public health facilities during the ten months. This amount is equal to the total annual allocation for medicines in the central budget. In addition, the medical district used 3.9 million CFA francs worth of antiparasitic drugs during the first ten months of cost recovery. Antibiotics represented 45 percent of the total medicines and small medical supplies used in the medical district, while antiparasitic drugs represented 31 percent of the total.

In the Boboye medical district, about 5.5 million CFA francs were used for antibiotics by the public health facilities during the ten months. This amount is more than the total annual allocation for medicines in the central budget. In addition, the medical district used 2.3 million CFA francs worth of antiparasitic drugs during the first ten months of cost recovery. Antibiotics represented 50 percent of the total medicines and small medical supplies used in the medical district, while antiparasitic drugs represented 21 percent of the total.

Figures 3.4c and 3.4d show the breakdown of expenditures for the medicines used in the Say and Boboye districts respectively by the type of medicine and the form in which it was administered. As noted in the previous subsections, there are significant differences between the two districts in the medical care patients receive. The pattern of antibiotic use is fairly comparable between the two medical districts. However, it can be seen that, on the average, the health personnel in the Say medical district use more injections to treat parasitic and diarrheal diseases compared with oral medication than the health personnel in the Boboye medical district use. This practice partly explains the differences in the average amount of medicines used between the two medical districts.

In conclusion, antibiotics and antiparasitic drugs accounted for the largest amounts spent on medicines to provide care in the two medical districts during the ten months from May 1993 to February 1994. In fact, antibiotics and antiparasitic drugs constituted nearly 75 percent of the amounts spent on medicines in the two medical districts. The cost of medicines to provide care at this level of the health system will basically depend on the price for these two types of medicines and the extent to which providers develop proficiency in the diagnostic and treatment protocols.

Figure 3.4a
DISTRIBUTION OF THE AMOUNTS SPENT ON MEDICINES BY TYPE OF MEDICINE:
SAY MEDICAL DISTRICT (DIRECT PAYMENT)

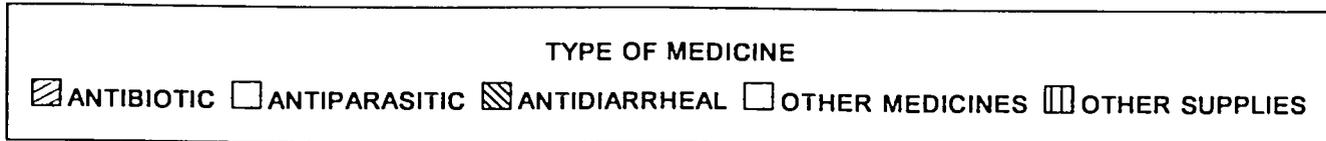
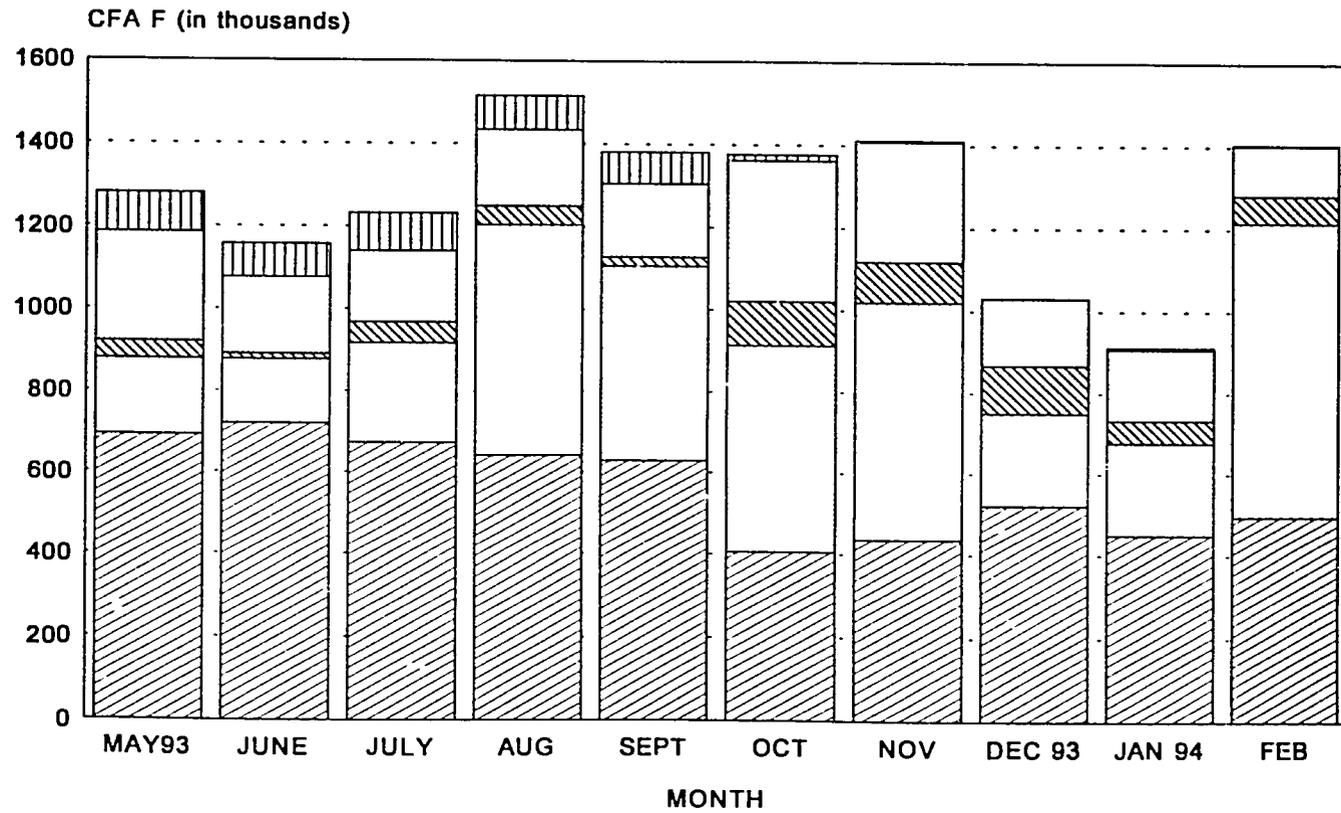


Figure 3.4b
 DISTRIBUTION OF THE AMOUNTS SPENT ON MEDICINE BY TYPE OF MEDICINE:
 BOBOYE MEDICAL DISTRICT (INDIRECT PAYMENT)

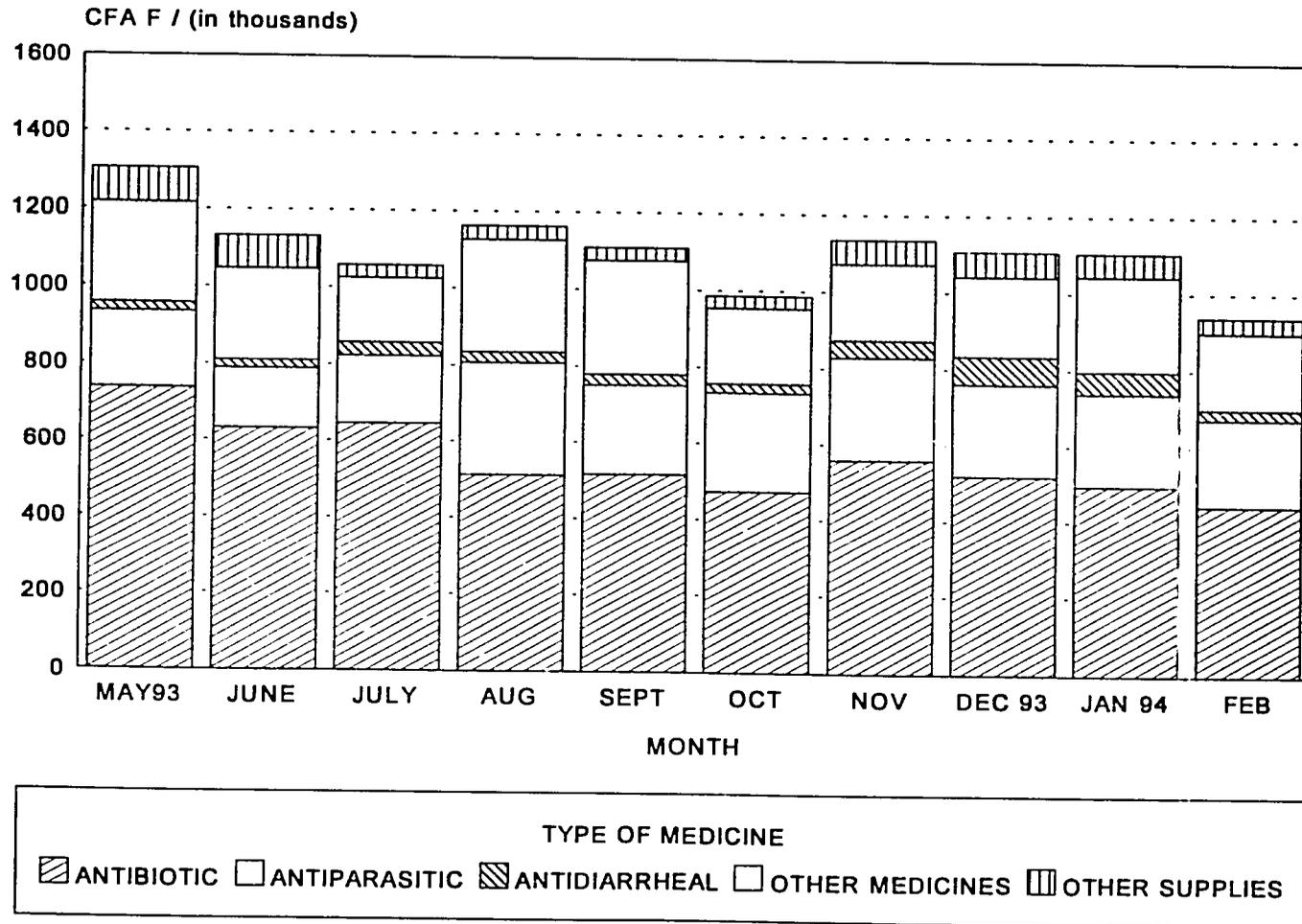


Figure 3.4c
 DISTRIBUTION OF THE AMOUNTS SPENT ON MEDICINES BY TYPE OF MEDICINE AND METHOD
 OF ADMINISTRATION - SAY MEDICAL DISTRICT (DIRECT PAYMENT): MAY 1993-FEBRUARY 1994

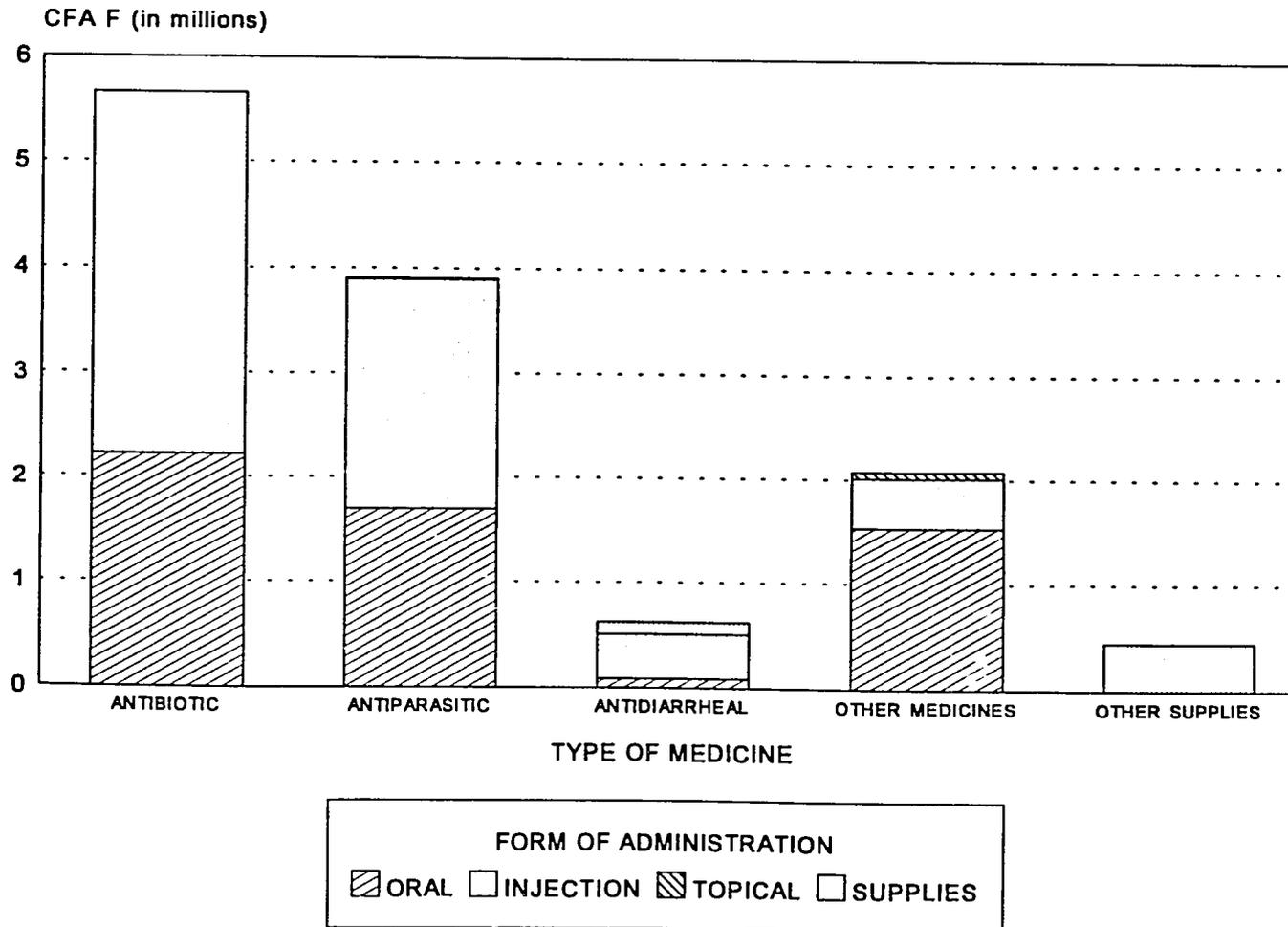
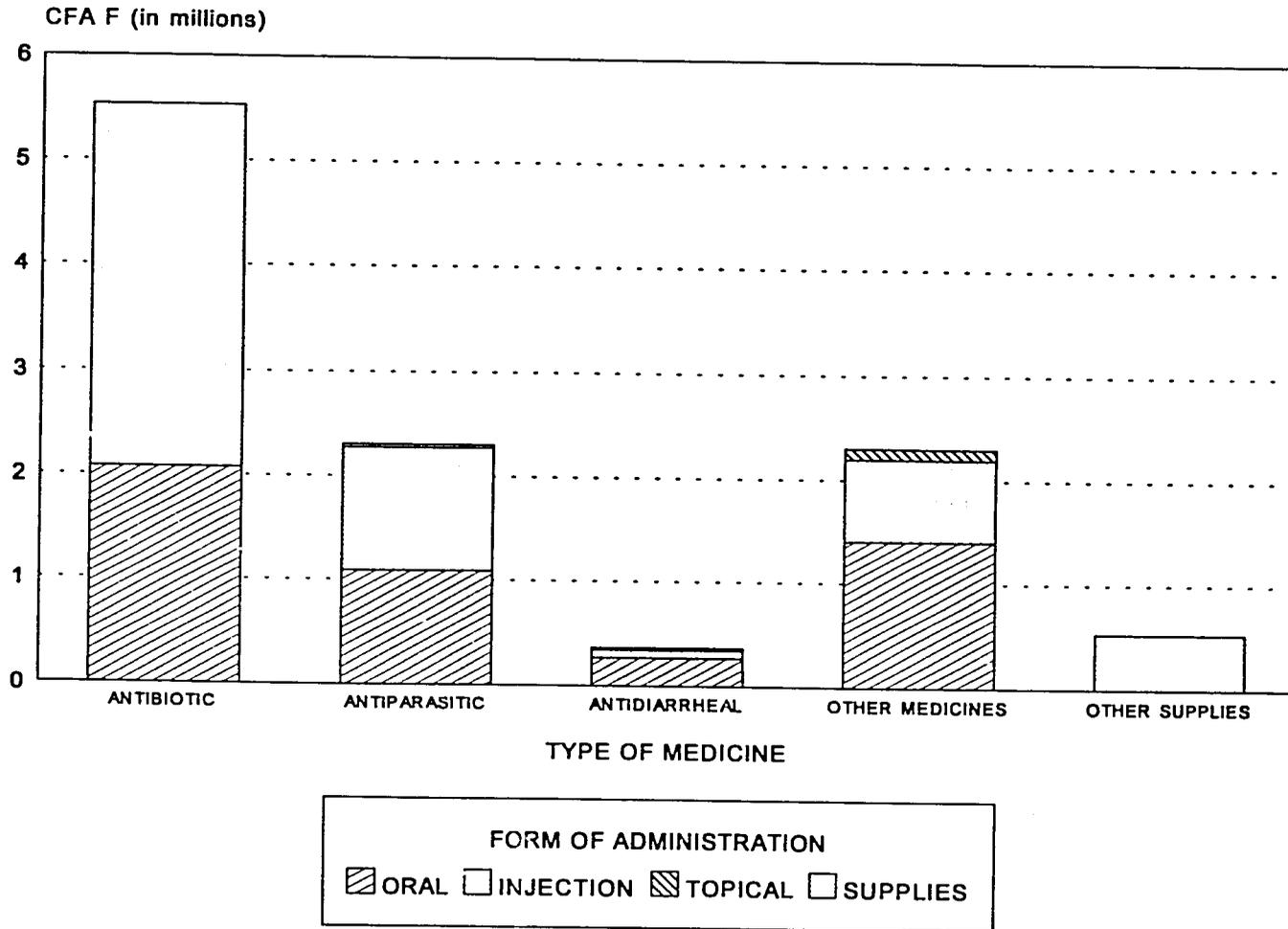


Figure 3.4d
 DISTRIBUTION OF THE AMOUNTS SPENT ON MEDICINES BY TYPE OF MEDICINE AND METHOD OF ADMINISTRATION - BOBOYE MEDICAL DISTRICT (DIRECT PAYMENT): MAY 1993-FEBRUARY 1994



4.0 RECEIPTS

Analyzing the amount of receipts and the monthly trend in receipts is much easier for the direct payment method used in Say, where there is only one source of income: payment per illness by the users. Under the indirect payment method being tested, however, receipts come from two different sources. The main source is the local tax surcharge of 200 CFA francs per tax payer, which enabled the Boboye district to collect 15 million CFA francs in a year. The second source of receipts is the co-payment by the users of the public health facilities. To compare the ability of the two payment methods to generate income and the monthly trend in this income, we shall rely on the working hypothesis that the income from Boboye's tax surcharge is distributed proportionally according to the number of initial visits each quarter. The SNIS data for 1992 was used as the basis for determining the distribution of income generated from the tax surcharge.

We shall first consider the amount of receipts, average receipts, and variations in receipts according to the type of health facility. Then we shall discuss the effect of exemptions and the patients' place of residence.

4.1 AMOUNT OF RECEIPTS

Tables A4.1a and A4.1b show the ability of the two payment methods to generate income in the two test districts of Say and Boboye respectively.

On the average, the direct payment method managed to generate 660,000 CFA francs per month during the period from May 1993 to February 1994. During the first ten months of cost recovery, the direct payment method was able to generate 6,575,000 CFA francs in the Say district. This is slightly more than the Say district's yearly allocation for medicines and medical supplies in the central budget. If the same trend continues during the last two months, March and April 1994, the Say medical district can be expected to have recovered close to 8 million CFA francs.

In the Boboye district, revenue from the tax contributed about 1.2 million CFA francs per month for the purchase of medicines during the period from May 1993 to February 1994. In addition, the co-payment from users of the health facilities generated an average of 370,000 CFA francs per month for the same period. In total, the Boboye district should have obtained 16.5 million CFA francs over the ten-month period from cost recovery. This is three to four times more than the district's yearly allocation for medicines and medical supplies in the central budget. Extrapolating from these figures for the twelve-month period, cost recovery will have generated 19.5 million CFA francs. This is four times the yearly allocation for medicines and medical supplies in the central budget.

In conclusion, the direct payment method has generated 8 million CFA francs in the Say district during the test year. Based on an estimated population of 210,000, this comes to a per capita contribution from the public of 38 CFA francs. In the Boboye district, the indirect payment method has provided additional resources of 19.5 million CFA francs—15 million from the local tax surcharge and 4.5 million from the co-payment contributed by users of the public health facilities. Based on an estimated population of 250,000, this amounts to a per capita contribution from the public of 78 CFA francs—60 CFA francs per person from the tax surcharge and 18 CFA francs per person from the co-payment. Thus, in terms of generating revenue, the

data from the first ten months of the pilot tests indicate that the indirect payment method is generating two times as much income as the direct payment method.

4.2 AVERAGE RECEIPTS

Figure 4.2 shows the amount of monthly receipts by the number of initial visits each month. Two distinct patterns in monthly receipts can be noted—one for the period from May 1993 to September 1993 and one for the period from October 1993 to February 1994. On the average, receipts per initial visit remained stable in the Say district from May to September. During the period, the direct payment method generated an average of 150-160 CFA francs per initial visit. After October, the average receipts dropped to a level of 125-140 CFA francs.

Paradoxically, the amount of receipts for each initial visit in the two districts were relatively similar. This equalizing trend in receipts per initial visit is partly explained by the increase in the number of visits to the public health facilities in the Boboye district in comparison with the number of visits in the Say district.

It must be noted that average receipts began to decrease in the two districts starting in October, as a result of increases among the non-paying categories of users, particularly students. The effect of exemptions will be described later in this report.

4.3 VARIATION BY TYPE OF HEALTH FACILITY

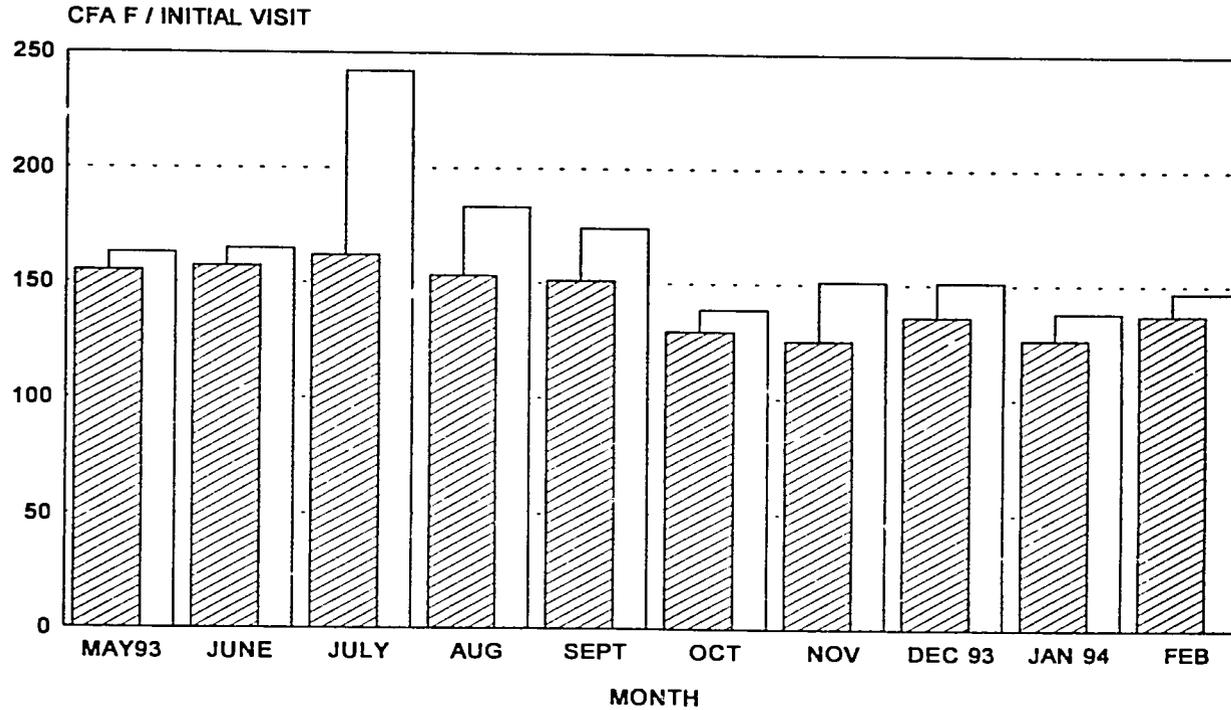
In general, the medical centers and medical posts have generated more receipts from users of their services than the rural dispensaries have generated. Over the first ten months of cost recovery in the Say district, the Say medical center and Torodi medical post generated as many receipts as the medical district's six rural dispensaries combined (see *Table A4.3* in the Annex). This disparity between the medical center and the medical post on the one hand and the rural dispensaries on the other hand was not observed in the Boboye district, however.

Average receipts from clients making initial visits for an illness episode were similar among the various types of health facilities. Thus, the differences in overall receipts appear linked to a mixed reaction over payment for health care by the populations in the areas served by the health facilities. Only among the rural dispensaries was a persistent reduction in the number of visits to the Say district's health facilities observed.

In the Boboye district, there was less variation in the receipts collected from co-payments from one type of health facility to another. Unlike the Say district, the co-payment has not deterred the populations served by the rural dispensaries from using them. The availability of medicines attracted patients, which resulted in an increase of initial visits and, consequently, of receipts at the rural dispensaries.

It is worth noting that because of the increase in the number of initial visits, and therefore in the demand for services, receipts at the individual rural dispensaries in Boboye have increased to levels comparable to the receipts at Say's rural dispensaries, where payment per illness is four (4) times higher.

Figure 4.2
 AVERAGE RECEIPTS PER INITIAL VISIT (CFA F) FROM COST RECOVERY
 DURING THE TEST YEAR BY MEDICAL DISTRICT



MEDICAL DISTRICT
 ▨ SAY - DIRECT □ BOBOYE - INDIRECT

In conclusion, the medical centers and medical posts within the same district are capable of generating higher revenues than the rural dispensaries. This situation is much more apparent in the Say district, where direct payment caused more variation in the use of the health facilities from the center to the outlying areas of the district.

4.4 THE EFFECT OF EXEMPTIONS

Figures 4.4a and 4.4b provide an estimate by exemption category of the amounts that could have been generated if those exempted had paid for health care at the health facilities in the Say and Boboye districts, respectively. The estimates project the upper limit on the additional resources that could have been generated if the non-paying categories were required to pay the adult rate.⁶

In the Say district, exemptions had a rather large effect because of the fees charged. Between May 1993 and February 1994, the amount that would have been generated from the exemptions averaged 18 percent of the total receipts for the period (see *Table A4.4a*). As can be seen, the subgroups exempted from payment are not necessarily the poorest. The largest category of exemptions is students, followed by members of the military and prisoners. In fact, the start of the school year quadrupled the effect of exemptions on the receipts generated by cost recovery in comparison with July, August, and September.

In the Boboye district, exemptions from the co-payment had relatively little effect on the total receipts from the tax and co-payments. Between May and September, the amount that would have been contributed by those exempted represented 1-2 percent of the total receipts. In October, however, when the school year began, the amount that would have been generated was 4-5 percent of the total receipts. This increase is basically due to the number of students, who account for the largest category of exemptions, ahead of prisoners.

4.5 PLACE OF RESIDENCE: CLIENTS MAKING INITIAL VISITS FOR AN ILLNESS

Under the indirect payment method, disparities in the use of the public health facilities due to the distance of these health facilities raise issues of equity, since the district's tax payers contribute the same amount regardless of their distance from the health facilities. The household surveys have provided more precise information on these issues. However, the data from the health facilities were used to help identify where clients making initial visits for an illness resided.

According to data from the 1988 General Population Census, 13 percent of Boboye's population and 16 percent of Say's population reside in villages where public health facilities are located. *Table A4.5* shows the data on the place of residence for these clients in the two districts.

⁶ The estimate is an upper limit because, all other factors remaining equal, the non-paying clients would in all likelihood have decreased their demand for services if they were required to pay.

Figure 4.4a
 TOTAL AMOUNT OF PAYMENT EXEMPTIONS PER MONTH (CFA F) BY EXEMPTION
 CATEGORY: SAY MEDICAL DISTRICT (DIRECT PAYMENT)

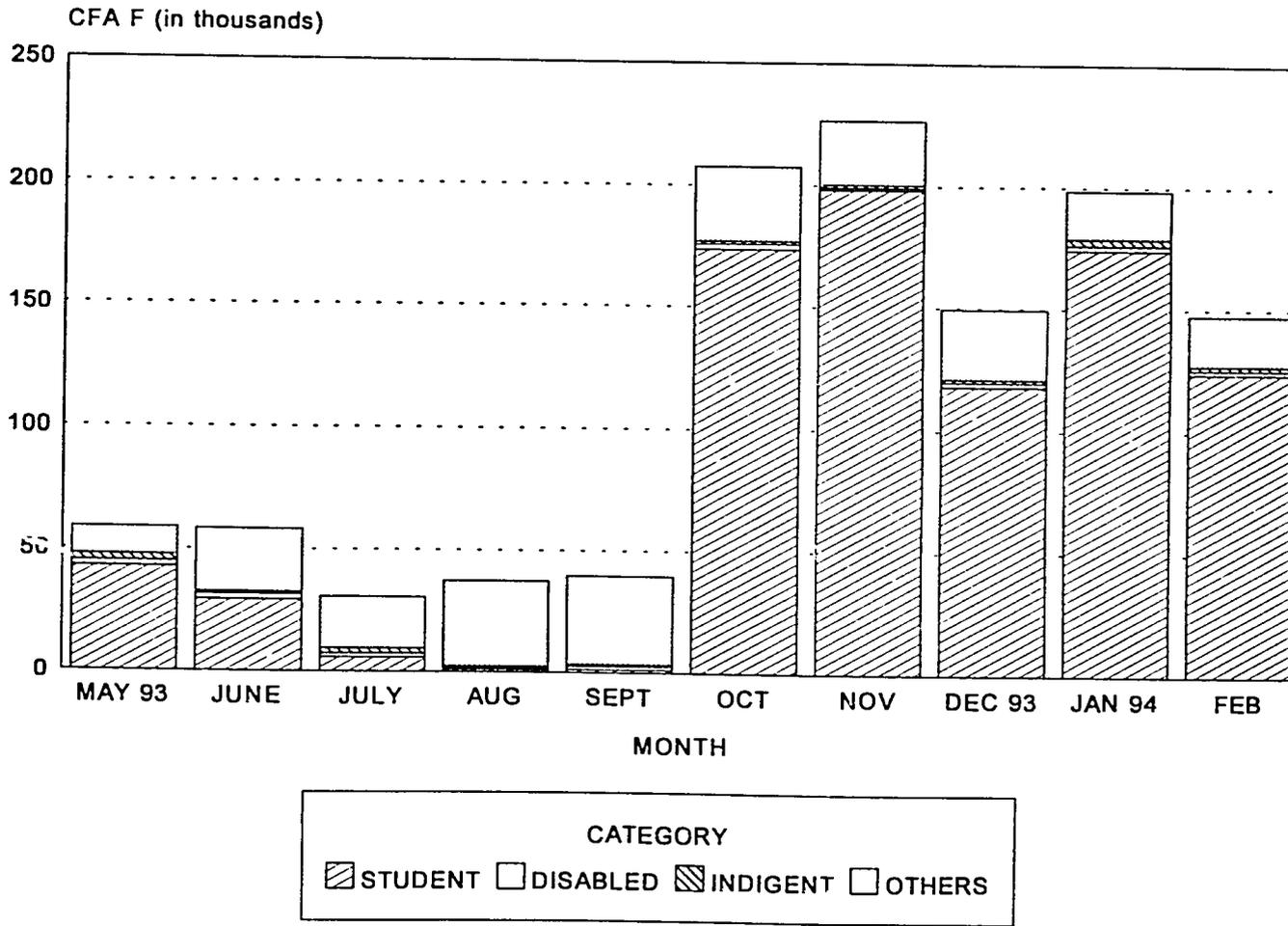
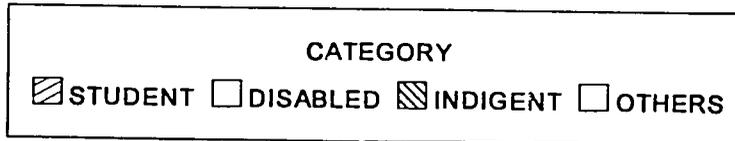
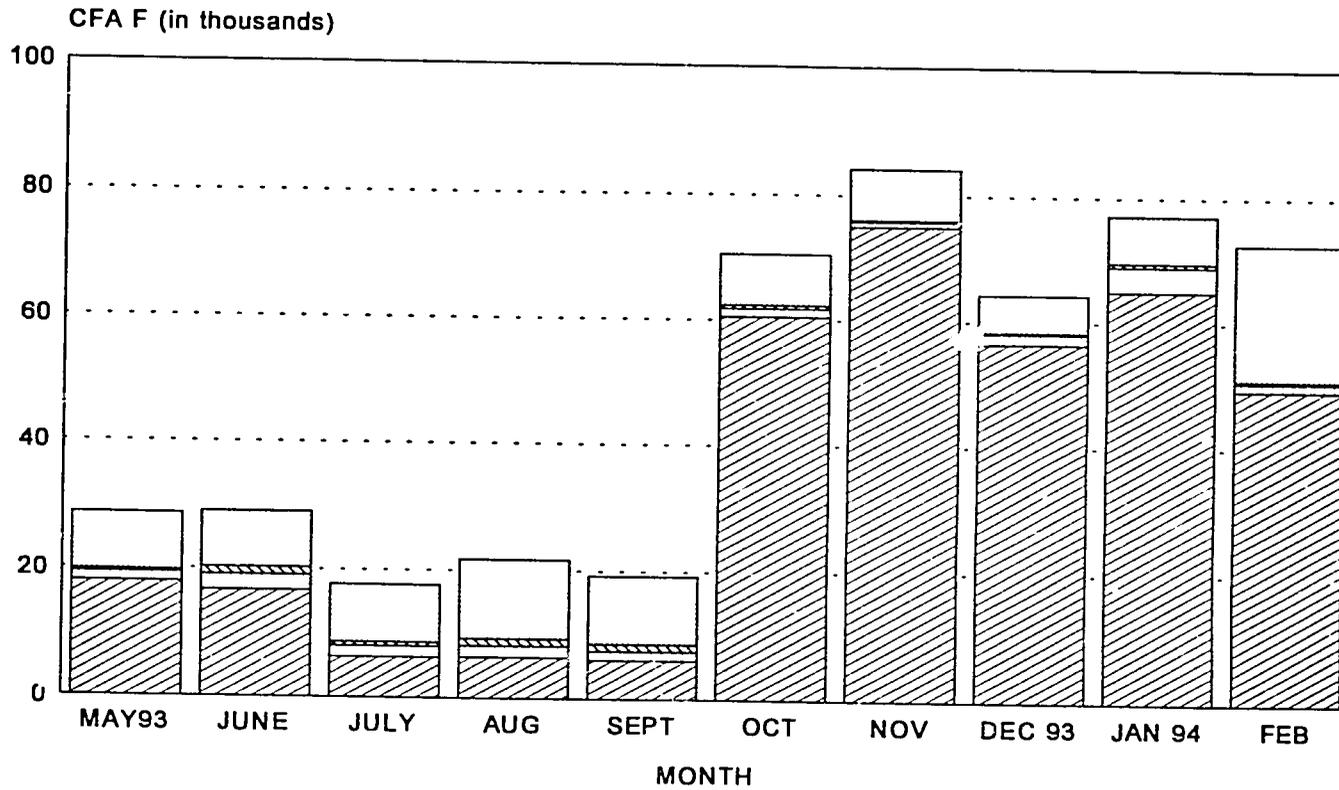


Figure 4.4b
 TOTAL AMOUNT OF PAYMENT EXEMPTIONS PER MONTH (CFA F) BY EXEMPTION
 CATEGORY: BOBOYE MEDICAL DISTRICT (INDIRECT PAYMENT)



In the two districts, clients making initial visits were equally divided in terms of their location in the district. This is to say that there were as many users from villages where the health facilities are located as users from villages in the district that have no health facility. Consequently, under the indirect payment method used for the pilot tests, the residents of villages that have no health facilities, and who are poorer, would subsidize the health services provided to residents of the villages where the health facilities are located.

Moreover, the health facilities in the Boboye district treated a relatively large number of patients from other districts—about 7 percent of the clients making initial visits. The residents of these other districts have not contributed to the indirect receipts for cost recovery.

Thus, under the direct payment method, the treatment of non-paying clients, such as students, may raise concerns about the viability of such a financing system, but also about the fairness of the system per se. Under the indirect payment method, the location of the health service users raises similar issues, though for a different reason.

5.0 INCREMENTAL COSTS

The introduction and administration of cost recovery produces incremental costs which are beyond the scope of the medical districts' operating expenses. The operating expenses are traditionally covered by the national government. The incremental costs basically include additional costs for medicines as well as administrative costs involved in the new management system. The viability of the local financing systems that are to be established will depend in part on the ability of the cost recovery method adopted to cover these incremental costs.

5.1 MEDICINES

Amounts spent on medicines were described under Section 3. That description will only be briefly summarized here. It has been estimated that in the Say district, the public health facilities used medicines totalling 12.7 million CFA francs during the period from May 1993 to February 1994 (see *Table A5.1a*). The public health facilities in the Boboye district used medicines totalling 11 million CFA francs during the ten-month period from May 1993 to February 1994 (see *Table A5.1b*).

Medicines used for the pilot tests were financed under the project. In addition to the government's contribution for medicines, other sources of financing provided significant quantities of medicines to the two medical districts, particularly Coopération Belge for the Boboye district and Coopération Malte for the Torodi canton.

It remains to be seen to what extent receipts generated by cost recovery can provide sustainable financing for supplies of medicines of this magnitude.

5.2 ADMINISTRATIVE COSTS

The reproduction of administrative materials, the supplies, and the salary costs for the new management system introduced under cost recovery were financed by funds from the pilot tests project. In the future, a financing system that can cover these administrative costs will have to be established at the local level.⁷

Tables A5.2a and A5.2b show the additional administrative costs incurred by the introduction of cost recovery in the Say and Boboye test districts respectively. In the Say district, recurring costs from the new management system for the medical district and its eight (8) health facilities are between 560,000 and 630,000 CFA francs per month. In the Boboye district, which has ten (10) health facilities, monthly administrative costs have reached 720,000 to 780,000 CFA francs.

⁷ Incremental salary costs for managing cost recovery basically consist of salaries and allowances for the health facility administrators. The administrators' salaries are two (2) times as high as the amount paid to the managers of pharmaceutical depots in the villages, regardless of whether the depots are cooperatives or privately run. With a view toward bringing administrative salaries in line with the amount depot managers are paid, the estimates for administrative costs in this report constitute an upper limit.

The administrative costs consist mostly of salary costs for administrators. As a result, the policy adopted for remunerating administrators will have an effect on the ability of the cost recovery system to cover the administrative costs. However, the costs for administrative materials could be reduced substantially. The most expensive item in this regard is the large number of receipt booklets used. By purchasing the booklets in large quantities, the per unit cost that has been paid since the tests began could be reduced.

As shown in *Tables A5.1a and A5.1b*, the costs for medicines and administration during the first ten months of the tests have increased the medical districts' monthly operating expenses by 1.75 million to 2 million CFA francs in the two districts.

6.0 COST RECOVERY

In this section, we shall compare the performance of the two payment methods in terms of their ability to recover the costs for medicines used in providing services, on the one hand, and the costs for medicines plus the incremental costs of administering the cost recovery system, on the other hand. Finally, we shall conclude with projections of the amount that the public can contribute for financing the medical districts' operating expenses through cost recovery.

6.1 COST RECOVERY: MEDICINES

Figures 6.1a and 6.1b show the amount of overall receipts from cost recovery and monthly spending on medicines in the two districts of Say and Boboye, respectively. It is readily apparent that the Say district is experiencing a financial shortfall that will have to be made up if the supplies of medicines are to be restored to the levels that were available during the test year. As mentioned above, the district's financial shortfall is basically due to a lack of proficiency in the diagnostic and treatment protocols by the medical district's care providers, which results in a large quantity of medicines used for each illness.

In the Boboye district, the longstanding use of the diagnostic and treatment protocols has managed to contain spending on medicines used for providing services at relatively low levels. In addition, as anticipated, the indirect payment method is capable of generating more revenues than the direct payment method. As a result, during the first ten months of testing, the receipts generated have covered the amounts spent on medicines in the Boboye district.

Figure 6.1c shows how the payment methods compare with each other in recovering costs. During the first ten months of cost recovery in the Say district, the receipts from the direct payment method were able to finance about 52 percent of the amount spent on medicines at the health facilities. This recovery rate remained fairly stable during the period from May 1993 to February 1994. The recovery rate under the direct payment method is comparable to the recovery rate observed during the Tibiri experiment in 1989.⁸

In the Boboye district, the receipts from the tax surcharge distributed proportionally per quarter and the receipts from payments were able to cover 150 percent of the amounts spent on medicines during the period. This high cost recovery rate for medicines in the district is partly explained by the greater proficiency of the medical district's care-providers in the use of the diagnostic and treatment protocols.⁹

⁸ In 1989, the experiment involving direct payment at the Tibiri medical post resulted in a recovery rate of about 53 percent: see *op. cit.*, Note 3, page 16.

⁹ The Boboye district's recovery rate would be comparable to the rate observed at Mirriah in 1990 if all the receipts from the tax at Mirriah had been used to purchase medicines: see *op. cit.*, Note 3, page 16.

Figure 6.1a
 RECEIPTS FROM COST RECOVERY AND AMOUNTS SPENT ON MEDICINES
 DURING THE TEST YEAR: SAY MEDICAL DISTRICT (DIRECT PAYMENT)

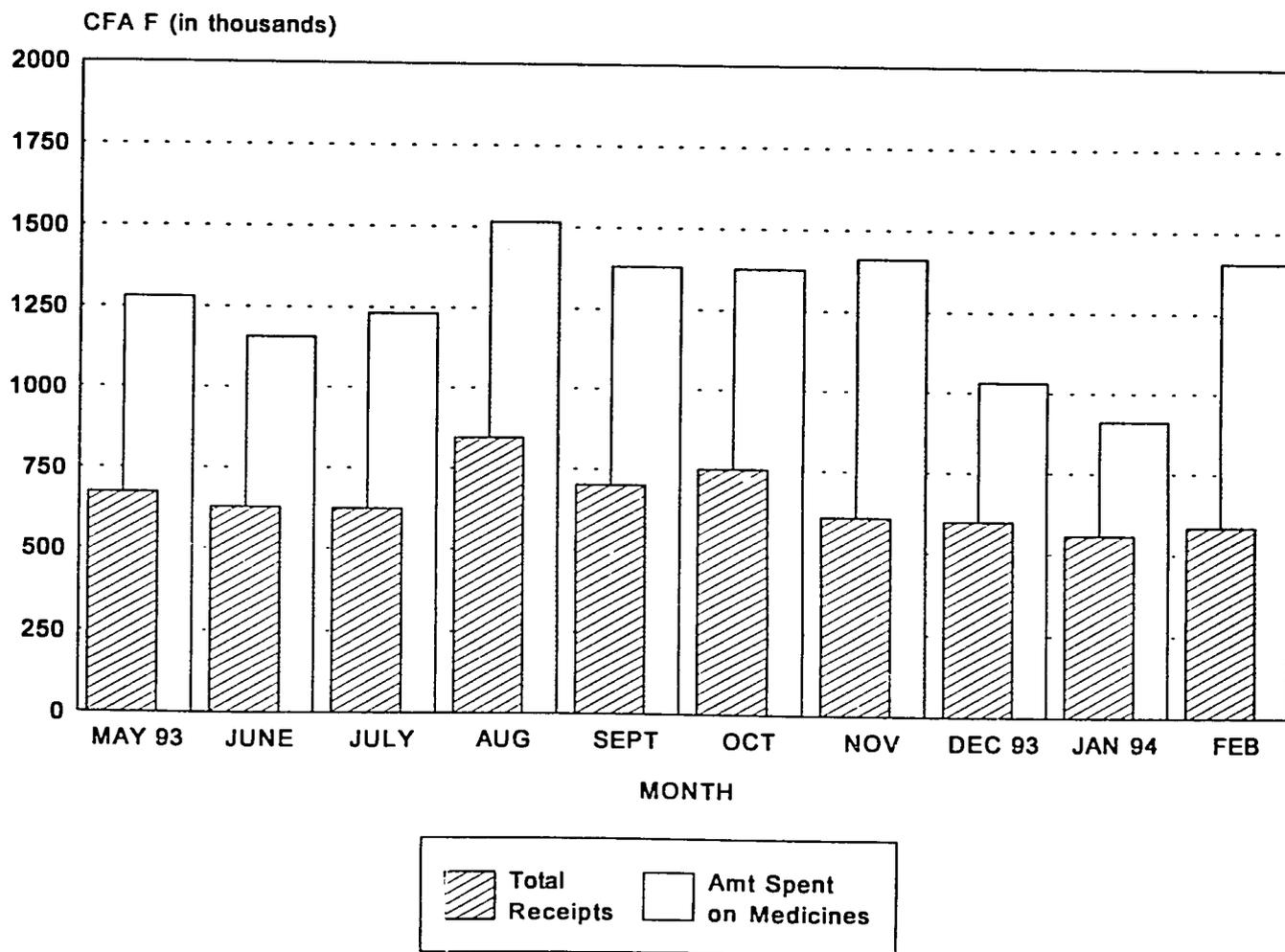


Figure 6.1b
 RECEIPTS FROM COST RECOVERY AND AMOUNTS SPENT ON MEDICINES
 DURING THE TEST YEAR: BOBOYE MEDICAL DISTRICT (INDIRECT PAYMENT)

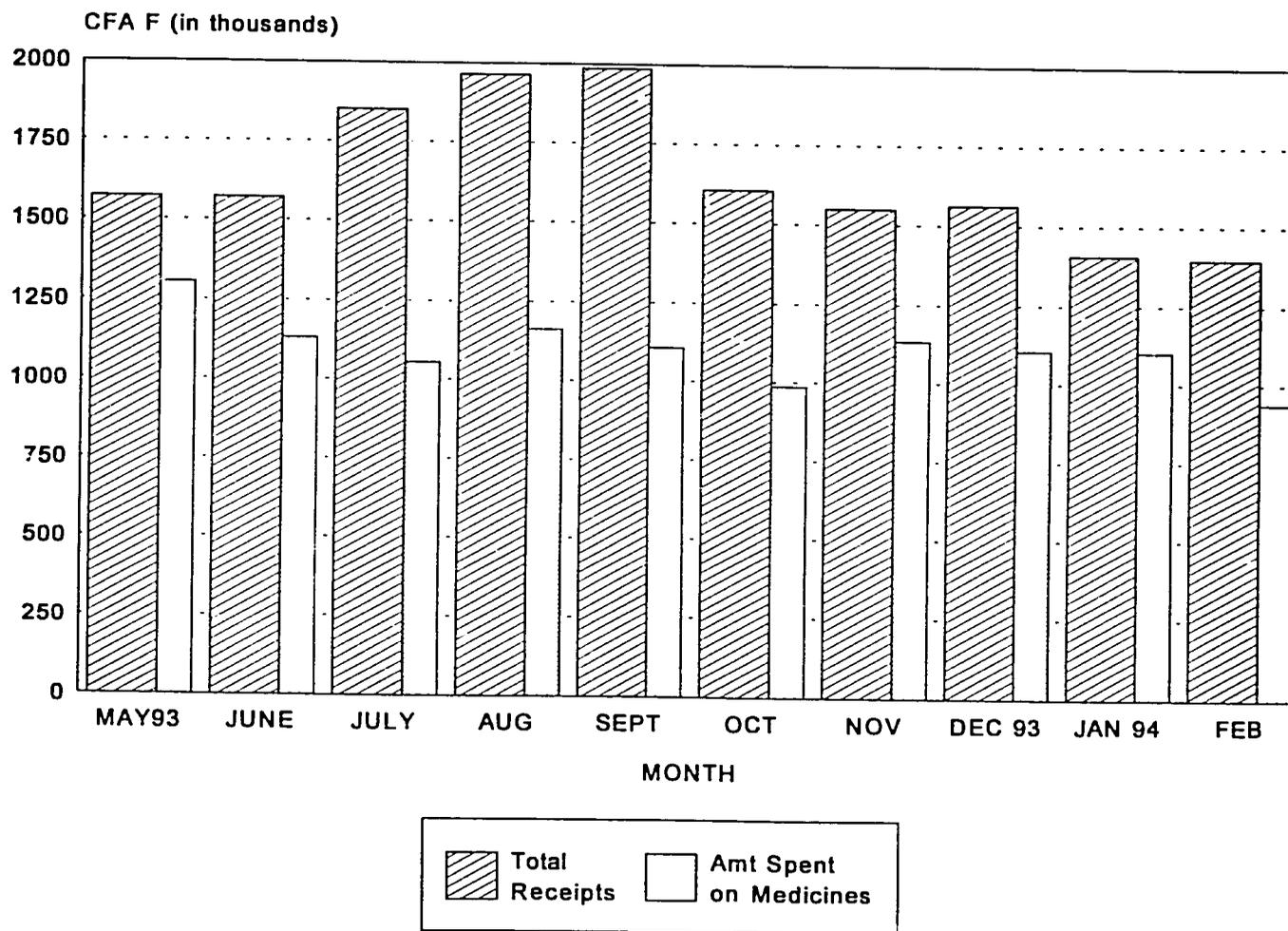
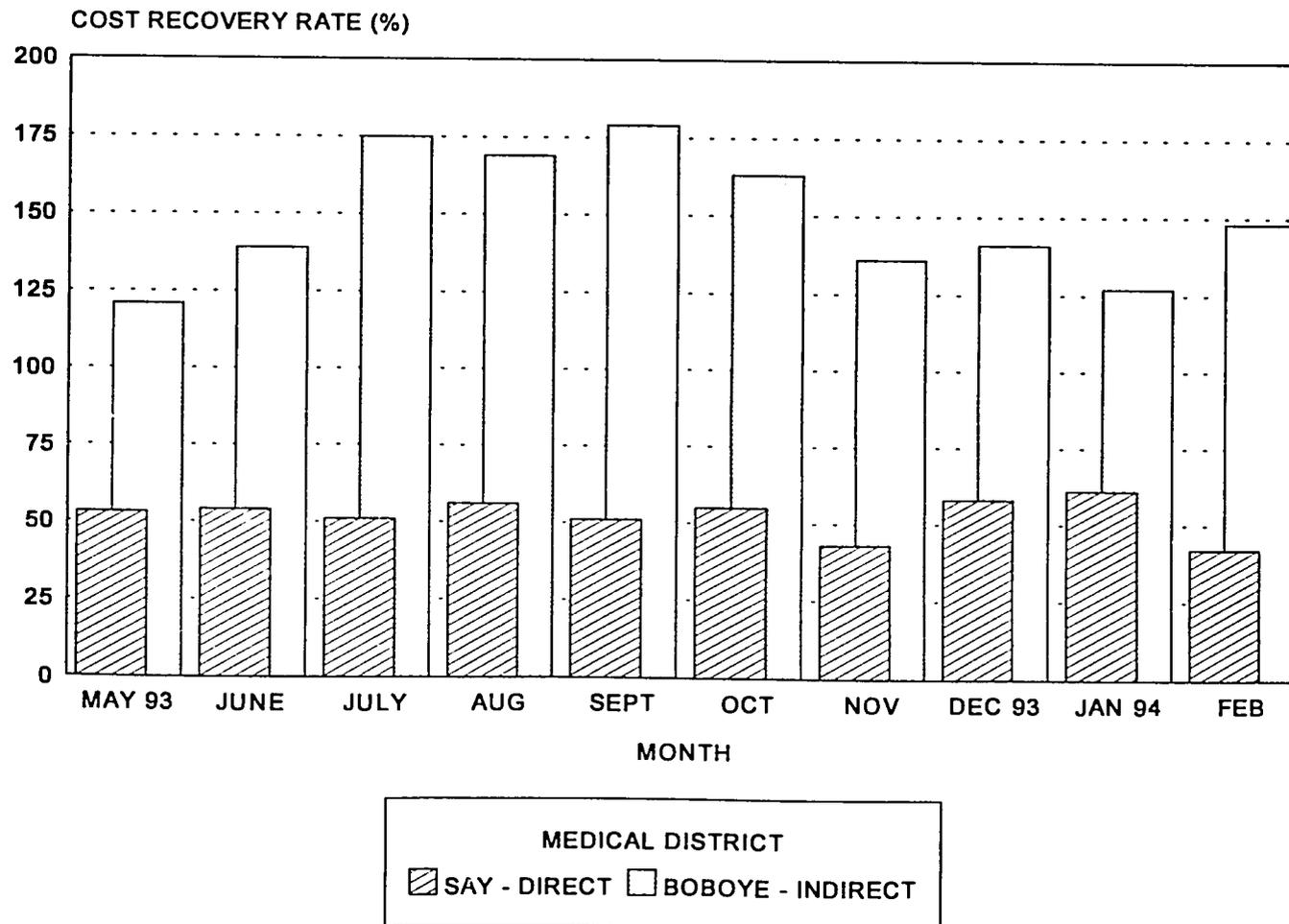


Figure 6.1c
 RATE OF COST RECOVERY FOR MEDICINES FROM THE PUBLIC'S CONTRIBUTIONS:
 SAY MEDICAL DISTRICT (DIRECT PAYMENT) AND BOBOYE MEDICAL DISTRICT (INDIRECT PAYMENT)



6.2 COST RECOVERY: MEDICINES AND ADMINISTRATION

.. *Figure 6.2* shows the cost recovery rates for spending on medicines and for expenses involved in the administration of cost recovery combined. It should be noted that additional costs from the collection of the tax under the Boboye district's indirect payment method are not taken into account in calculating the administrative expenses for cost recovery.¹⁰

From May 1993 to February 1994, receipts from the direct payment method in the Say district covered 35 percent of the amounts spent on medicines and the incremental costs for administering cost recovery. In the Boboye district, the cost recovery rates for medicines and administration averaged 90 percent from May 1993 to February 1994.

6.3 COST RECOVERY AND THE HEALTH FACILITIES' OPERATING EXPENSES

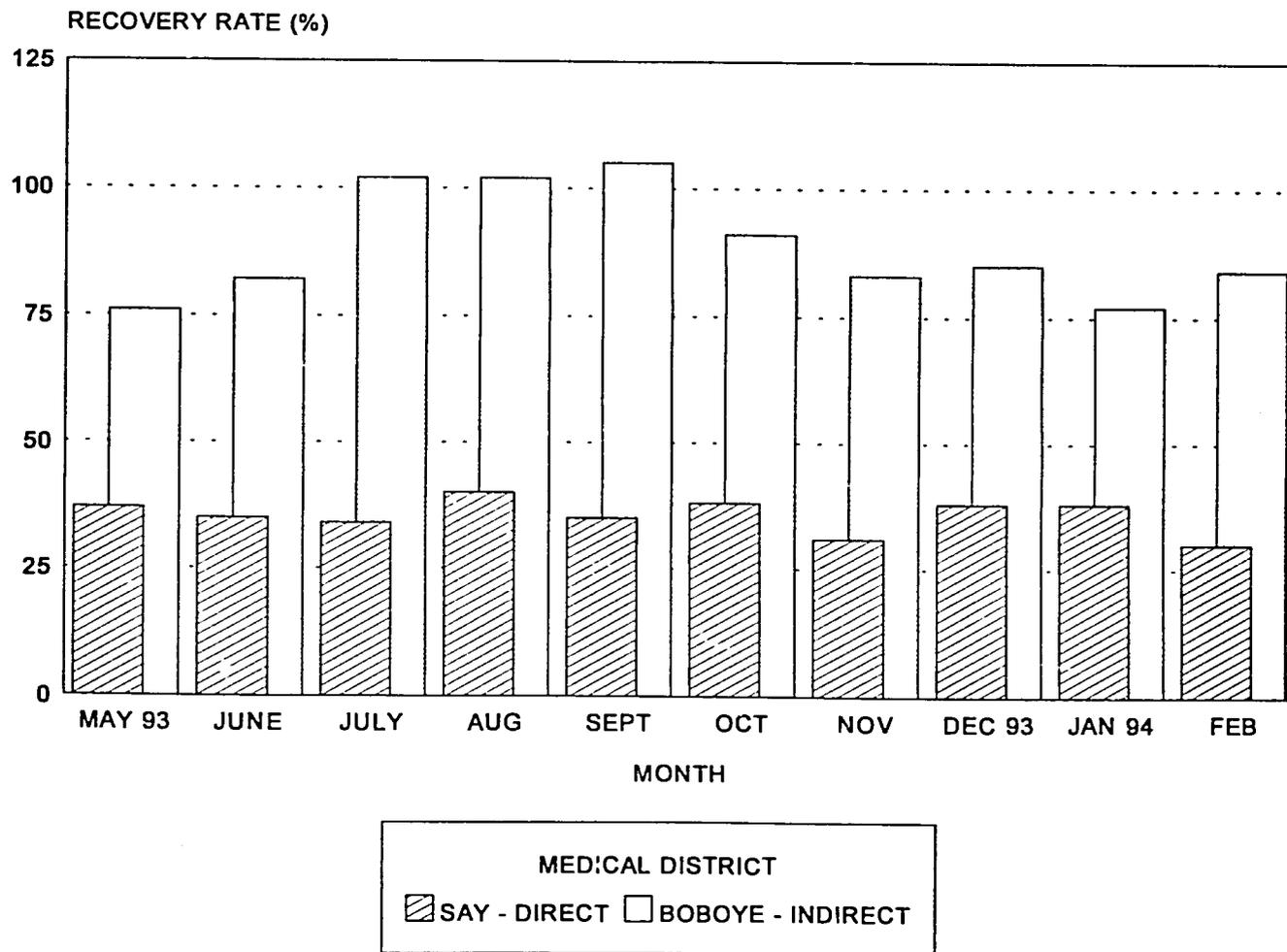
The operating expenses considered under this rubric include personnel costs and costs involved in operating the facilities—including maintenance and supplies, food, travel, and allocations for fuel. Fuel allocations for the expanded program on immunization have not been included. The purpose of these estimates is to determine the percentage of the medical districts' operating expenses that the public could contribute as an upper limit under the cost recovery system.

Under the direct payment method, with the rates in effect in the Say district, the public could provide 15 percent of the operating expenses (see *Table A6.3* in the Annex).

Under the indirect payment method, with the rates in effect in the Boboye district, it appears that the public could provide about 35 percent of the administrative district's operating expenses (see *Table A6.3* in the Annex).

¹⁰ The district's tax surcharge for the financing of medicines is collected at the same time that the district tax is collected. Consequently, additional administrative costs for the indirect payment method would involve more than just administrative costs at the health facilities. It is not likely, however, that the tax surcharge added significant additional costs to the collection of the district tax, except for costs related to informing the public about the new system.

Figure 6.2
 RATE OF COST RECOVERY FOR MEDICINES AND ADMINISTRATIVE COSTS FROM THE PUBLIC'S
 CONTRIBUTIONS: SAY MEDICAL DISTRICT (DIRECT PAYMENT) AND BOBOYE MEDICAL DISTRICT (INDIRECT PAYMENT)



7.0 CONCLUSION

Since May 1993, the Ministry of Public Health (MSP) has instituted cost recovery in the public health facilities of the Boboye and Say districts under the Pilot Tests Project on Cost Recovery in the Non-Hospital Sector. The goal of this applied research through pilot tests is to assess the performance of two payment methods for health care, in order to identify a method to be included in the formulation of a national policy on cost recovery in the non-hospital sector.

The pilot tests focus on the public health facilities. The tests consist of three main components. The first component involves making effective use of available resources by using generic essential medicines and diagnostic and treatment protocols in treating illnesses. The second component is aimed at improving the management capabilities at the medical district level and at the health facilities. The last component seeks to mobilize resources at the local level to finance pharmaceuticals. Under this last component, two payment methods are being tested. The first method—indirect payment—involves a district tax surcharge of 200 CFA francs per tax payer and a co-payment per illness of 50 CFA francs for adults and 25 CFA francs for children under five. The second method—direct payment—involves a lump sum payment per illness of 200 CFA francs for adults and 100 CFA francs for children under five. The indirect payment method is being tested in the Boboye district; the direct payment method is being tested in the Say district. A third district, Illéla, is serving as the control area: no intervention is being conducted there. Thus, this district represents the status quo.

The data in this report cover the period from May 1993 to February 1994—the first ten months of the test year. The data describe the performance of cost recovery in terms of its impact on the use of the public health facilities, the continuity of treatment, the amount of medicines used, the receipts taken in from cost recovery, the expenditures for medicines and administration, and the amounts recovered for these expenses.

During the first ten months of the test year, cost recovery has had a varied effect on the use of the health facilities in the two test districts of Boboye and Say. These varied results can be evaluated by comparing them with the results for the health facilities in the control district of Illéla. In Illéla, the services at the public health facilities, measured in terms of the number of initial and return visits for new illness episodes, remained at the levels observed during the period from May 1992 to February 1993. In other words, no major occurrences disrupted the normal level of services at the health facilities during the first ten months of the test year.

After the pilot tests had been instituted, the public health facilities in the Boboye district experienced an increase in the use of their services. The greater availability of medicines and the collection of a co-payment for services resulted in a distinct increase in the demand for health services. The number of initial visits increased 39 percent between the period from May 1992 to February 1993, the base period, and the period from May 1993 to February 1994, the test period. In other words, requiring patients to contribute a co-payment did not deter them from visiting the health facilities. The patients were strongly attracted to the facilities by the availability of medicines. Moreover, the availability of medicines improved the management of the patients' illnesses and the quality of treatment: the number of return visits to the district's public health facilities increased 119 percent.

Results were more varied in the Say test district, where the direct payment method was instituted. Despite the increased availability of medicines, the number of initial visits decreased slightly at most of the rural dispensaries. Depending on the month, however, the medical post and medical center showed a distinct increase in use. The most noticeable change involved the continuity of treatment: most of the district's public health facilities experienced an increase in the number of return visits.

A consequence of this heavy use of the public health facilities in the test districts was the large volume of medicines used to provide services. On the whole, the two medical centers each used more than 1 million CFA francs worth of medicines per month. In the Say district, the eight public health facilities used 12.7 million CFA francs in medicines over the ten-month period from May 1993 to February 1994. This is twice the annual allocation for medicines in the government's budget, which is about 6 million CFA francs. In the Boboye district, 11 million CFA francs worth of medicines were used in the ten public health facilities between May 1993 and February 1994. The use of medicines observed over the ten months of cost recovery represents two and a half times the annual allocation for medicines in the government's budget, which is about 4.5 million CFA francs.

A large portion of the medicines used for the pilot tests were generic medicines supplied by the project. In other words, the monthly use of medicines observed in the two test districts indicates that the country's current allocations for medicines to the medical districts are well below actual needs.

The average amount spent on medicines varied widely from one district to the other and from one health facility to another. This trend partly reflects disparities in the mastery of the diagnostic and treatment protocols. In the Boboye district, which has been using the protocols for several years, the average amount spent on medicines per illness fluctuated between 90 and 140 CFA francs between May 1993 and February 1994, depending on the month. In the Say district, however, where the use of the protocols was introduced the year the pilot tests were instituted, the average amount spent on medicines per illness ranged from 200 to 330 CFA francs between May 1993 and February 1994. In the Boboye district, the average amounts spent on medicines were similar across health facilities, from the medical center to the rural dispensaries. In the Say district, however, the amount spent on medicines for providing services was higher at the rural dispensaries than at the medical center during the first five months.

During the ten months from May 1993 to February 1994, the largest amounts spent on medicines in the two medical districts were for antibiotics and antiparasitic drugs. In fact, antibiotics and antiparasitic drugs accounted for nearly 75 percent of the amounts spent on medicines in the two medical districts. The cost of medicines for providing care and the extent to which the health system can provide the basic funds will essentially depend on the price of these two types of medicines and on the degree to which care-providers develop proficiency in the diagnostic and treatment protocols.

The direct payment method generated 8 million CFA francs during the test year in the Say district. Based on an estimated population of 210,000, the population's per capita contribution amounted to 38 CFA francs. In the Boboye district, the indirect payment method provided 19.5 million CFA francs in additional resources—15 million from the local tax surcharge and 4.5 million from the co-payment contributed by users of the public health facilities. Based on an estimated population of 250,000, the population's per capita contribution amounted to 78 CFA francs—60 CFA francs per person from the tax surcharge and 18 CFA francs per person from co-payments. Thus, in terms of generating revenue, the data from

the first ten months of the pilot tests indicate that the indirect payment method is performing at twice the level of the direct payment method.

.. The different payment methods and the exemption system used for the tests raise issues of equity. Under the indirect payment method, the rationing of health care by physical distance from the public health facilities penalizes residents of villages that are far from the health facilities. Yet, through the district tax surcharge used to purchase medicines, they are subsidizing the health care received by the main users of the health facilities—those who live in villages where the health facilities are located. Under the two payment methods, students, persons in the military, and prisoners used their exemptions more than the indigent. The provision of health care for students and persons in the military is an issue that should be investigated, as exemptions for these categories were costly, especially under the direct payment method.

The resources from the tax surcharge combined with the receipts from the co-payments, on the one hand, and greater mastery of the diagnostic and treatment protocols, on the other hand, have enabled the Boboye medical district to achieve a 120-180 percent cost recovery rate for medicines, depending on the month. In the Say district, receipts from the lump sum payment for each illness recovered 50-55 percent of the costs for medicines. Receipts from the tax surcharge and the payments covered 75-105 percent of the amount spent on medicines and the incremental administrative costs incurred by cost recovery and improvements in the management of the health facilities in the Boboye district. In the Say district, however, the receipts covered only 30-40 percent of the amount spent on medicines and administration.

ANNEX: TABLES

Table A2.1
Use of the Public Health Facilities
Number of Initial Visits for the Treatment of Illnesses

| Month | MEDICAL DISTRICT | | | | | | | | |
|---------------|---------------------------------------|---------------------------------------|-------------------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|
| | ILLELELA - CONTROL | | | SAY - DIRECT | | | BOBOYE - INDIRECT | | |
| | BEFORE PILOT TESTS ¹ | DURING PILOT TESTS ² | Rate of Change % ³ | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % |
| MAY | 3,385 | 2,950 | -13 | 4,279 | 4,920 | 15 | 8,043 | 11,032 | 37 |
| JUNE | 2,676 | 2,998 | 12 | 4,401 | 3,981 | -10 | 5,559 | 9,519 | 71 |
| JULY | 2,487 | 2,222 | -11 | 5,437 | 3,860 | -29 | 7,045 | 7,630 | 8 |
| AUGUST | 4,140 | 3,962 | -4 | 5,625 | 5,500 | -2 | 8,968 | 10,681 | 19 |
| SEPTEMBER | 5,933 | 5,436 | -8 | 5,917 | 4,625 | -22 | 8,718 | 11,399 | 31 |
| OCTOBER | 5,112 | 3,814 | -25 | 6,429 | 5,801 | -10 | 8,991 | 11,482 | 28 |
| NOVEMBER | 3,562 | 3,479 | -2 | 5,704 | 4,856 | -15 | 8,124 | 10,231 | 26 |
| DECEMBER | 2,834 | 2,974 | 5 | 4,444 | 4,399 | -1 | 7,006 | 10,283 | 47 |
| JANUARY | 2,954 | 3,212 | 9 | 4,397 | 4,391 | 0 | 4,855 | 10,154 | 109 |
| FEBRUARY | 2,659 | 3,028 | 14 | 3,721 | 4,242 | 14 | 5,813 | 9,466 | 63 |
| PERIOD | 35,742 | 34,075 | -5 | 50,354 | 46,575 | -8 | 73,122 | 101,877 | 39 |

1. The period "before pilot tests" is defined as the calendar months from May 1992 to April 1993, i.e., the year before the initial supplies of medicines were established and payment for care was instituted in the health facilities of the Say and Boboye medical districts.
2. The period "during pilot tests" is defined as the calendar months from May 1993 to April 1994, i.e., the test year during which the pilot tests project regularly supplied the health facilities of the Say and Boboye medical districts with generic essential medicines and payment was collected.
3. The rate of change for a given month *i* is defined as follows: rate of change(*i*) = $((C_{2,i} - C_{1,i})/C_{1,i}) \times 100$, where $C_{1,i}$ is the number of new clients during month *i* for the "before pilot tests" period, and $C_{2,i}$ is the number of new clients during month *i* for the "during pilot tests" period.

Table A2.2a
Use of the Public Health Facilities
Number of Return Visits for the Treatment of Illnesses

| Month | MEDICAL DISTRICT | | | | | | | | |
|---------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|
| | ILLELA - CONTROL | | | SAY - DIRECT | | | BOBOYE - INDIRECT | | |
| | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % |
| MAY | 3.041 | 3.641 | 20 | 4.106 | 5.620 | 37 | 5.455 | 11.085 | 103 |
| JUNE | 2.480 | 2.488 | 0 | 3.682 | 5.558 | 51 | 4.137 | 9.877 | 139 |
| JULY | 1.973 | 1.757 | -11 | 4.284 | 4.784 | 12 | 5.410 | 9.202 | 70 |
| AUGUST | 3.036 | 2.755 | -9 | 4.636 | 6.512 | 40 | 6.757 | 11.273 | 67 |
| SEPTEMBER | 4.371 | 4.428 | 1 | 4.225 | 5.777 | 37 | 5.955 | 13.074 | 120 |
| OCTOBER | 3.425 | 4.092 | 19 | 5.079 | 6.881 | 35 | 6.550 | 12.818 | 96 |
| NOVEMBER | 2.976 | 3.539 | 19 | 4.255 | 6.444 | 51 | 6.333 | 12.703 | 101 |
| DECEMBER | 3.007 | 3.898 | 30 | 3.731 | 5.878 | 58 | 5.472 | 12.894 | 136 |
| JANUARY | 3.249 | 4.070 | 25 | 3.237 | 5.676 | 75 | 3.327 | 12.871 | 287 |
| FEBRUARY | 2.265 | 3.408 | 50 | 3.709 | 5.959 | 61 | 4.334 | 11.667 | 169 |
| PERIGD | 29,823 | 34,076 | 14 | 40,944 | 59,089 | 44 | 53,730 | 117,464 | 119 |

See notes 1, 2 and 3, Table A2.1.

Table A2.2b
Use of the Public Health Facilities
Number of Visits for the Treatment of Illnesses

| Month | MEDICAL DISTRICT | | | | | | | | |
|---------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|
| | ILLELELA - CONTROL | | | SAY - DIRECT | | | BOBOYE - INDIRECT | | |
| | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % |
| MAY | 6.426 | 6.591 | 3 | 8.385 | 10.540 | 26 | 13.498 | 22.117 | 64 |
| JUNE | 5.156 | 5.486 | 6 | 8.083 | 9.539 | 18 | 9.696 | 19.396 | 100 |
| JULY | 4.460 | 3.979 | -11 | 9.721 | 8.644 | -11 | 12.455 | 16.832 | 35 |
| AUGUST | 7.176 | 6.717 | -6 | 10.261 | 12.012 | 17 | 15.725 | 21.954 | 40 |
| SEPTEMBER | 10.304 | 9.864 | -4 | 10.142 | 10.402 | 3 | 14.673 | 24.473 | 67 |
| OCTOBER | 8.537 | 7.906 | -7 | 11.508 | 12.682 | 10 | 15.541 | 24.300 | 56 |
| NOVEMBER | 6.538 | 7.018 | 7 | 9.959 | 11.300 | 13 | 14.457 | 22.934 | 59 |
| DECEMBER | 5.841 | 6.872 | 18 | 8.175 | 10.277 | 26 | 12.478 | 23.177 | 86 |
| JANUARY | 6.203 | 7.282 | 17 | 7.634 | 10.067 | 32 | 8.182 | 23.025 | 181 |
| FEBRUARY | 4.924 | 6.436 | 31 | 7.430 | 10.201 | 37 | 10.147 | 21.133 | 108 |
| PERIOD | 65.565 | 68.151 | 4 | 91.298 | 105.664 | 16 | 126.852 | 219.341 | 73 |

See notes 1, 2 and 3. Table A2.1.

Table A2.3a
Illéla District
Use of the Public Health Facilities
Number of Initial Visits for the Treatment of Illnesses
By Type of Health Facility

| Month | TYPE OF HEALTH FACILITY | | | | | | | | |
|-----------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|
| | Medical Center | | | Medical Post | | | Rural Dispensaries | | |
| | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % |
| MAY | 1.526 | 1.503 | -2 | 322 | 333 | 3 | 1.537 | 1.114 | -28 |
| JUNE | 1.057 | 1.827 | 73 | 391 | 243 | -38 | 1.228 | 928 | -24 |
| JULY | 946 | 1.212 | 28 | 272 | 226 | -17 | 1.269 | 784 | -38 |
| AUGUST | 1.983 | 2.026 | 2 | 483 | 435 | -10 | 1.674 | 1.501 | -10 |
| SEPTEMBER | 2.923 | 2.476 | -15 | 834 | 718 | -14 | 2.176 | 2.242 | 3 |
| OCTOBER | 2.278 | 1.572 | -31 | 660 | 497 | -25 | 2.174 | 1.745 | -20 |
| NOVEMBER | 1.594 | 1.580 | -1 | 506 | 501 | -1 | 1.462 | 1.398 | -4 |
| DECEMBER | 976 | 1.074 | 10 | 553 | 511 | -8 | 1.305 | 1.389 | 6 |
| JANUARY | 1.457 | 978 | -33 | 421 | 533 | 27 | 1.076 | 1.701 | 58 |
| FEBRUARY | 1.386 | 936 | -32 | 382 | 437 | 14 | 891 | 1.655 | 86 |
| PERIOD | 16.126 | 15.184 | -6 | 4.824 | 4.434 | -8 | 14.792 | 14.457 | -2 |

See notes 1, 2 and 3, Table A2.1.

Table A2.3b
 Illéla District
 Use of the Public Health Facilities
 Number of Return Visits for the Treatment of Illnesses
 By Type of Health Facility

| Month | TYPE OF HEALTH FACILITY | | | | | | | | |
|---------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|
| | Medical Center | | | Medical Post | | | Rural Dispensaries | | |
| | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % |
| MAY | 1,154 | 1,788 | 55 | 225 | 373 | 66 | 1,662 | 1,480 | -11 |
| JUNE | 811 | 1,233 | 52 | 207 | 247 | 19 | 1,462 | 1,008 | -31 |
| JULY | 680 | 751 | 10 | 266 | 219 | -18 | 1,027 | 787 | -23 |
| AUGUST | 1,156 | 1,118 | -3 | 419 | 376 | -10 | 1,461 | 1,261 | -14 |
| SEPTEMBER | 1,834 | 2,250 | 23 | 661 | 537 | -19 | 1,876 | 1,641 | -13 |
| OCTOBER | 1,112 | 2,250 | 102 | 462 | 440 | -5 | 1,851 | 1,402 | -24 |
| NOVEMBER | 1,024 | 1,961 | 92 | 488 | 426 | -13 | 1,464 | 1,152 | -21 |
| DECEMBER | 1,201 | 2,139 | 78 | 376 | 468 | 24 | 1,430 | 1,291 | -10 |
| JANUARY | 1,423 | 1,926 | 35 | 363 | 589 | 62 | 1,463 | 1,555 | 6 |
| FEBRUARY | 914 | 1,487 | 63 | 306 | 418 | 37 | 1,045 | 1,503 | 44 |
| PERIOD | 11,309 | 16,903 | 49 | 3,773 | 4,093 | 8 | 14,741 | 13,080 | -11 |

See notes 1, 2 and 3, Table A2.1.

Table A2.3c
Illéla District
Use of the Public Health Facilities
Number of Visits for the Treatment of Illnesses
By Type of Health Facility

| Month | TYPE OF HEALTH FACILITY | | | | | | | | |
|-----------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|
| | Medical Center | | | Medical Post | | | Rural Dispensaries | | |
| | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % |
| MAY | 2,680 | 3,291 | 23 | 547 | 706 | 29 | 3,199 | 2,594 | -19 |
| JUNE | 1,868 | 3,060 | 64 | 598 | 490 | -18 | 2,690 | 1,936 | -28 |
| JULY | 1,626 | 1,963 | 21 | 538 | 445 | -17 | 2,296 | 1,571 | -32 |
| AUGUST | 3,139 | 3,144 | 0 | 902 | 811 | -10 | 3,135 | 2,762 | -12 |
| SEPTEMBER | 4,757 | 4,726 | -1 | 1,495 | 1,255 | -16 | 4,052 | 3,883 | -4 |
| OCTOBER | 3,390 | 3,822 | 13 | 1,122 | 937 | -16 | 4,025 | 3,147 | -22 |
| NOVEMBER | 2,618 | 3,541 | 35 | 994 | 927 | -7 | 2,926 | 2,550 | -13 |
| DECEMBER | 2,177 | 3,213 | 48 | 929 | 979 | 5 | 2,735 | 2,680 | -2 |
| JANUARY | 2,880 | 2,904 | 1 | 784 | 1,122 | 43 | 2,539 | 3,256 | 28 |
| FEBRUARY | 2,300 | 2,423 | 5 | 688 | 855 | 24 | 1,936 | 3,158 | 63 |
| PERIOD | 27,435 | 32,087 | 17 | 8,597 | 8,527 | -1 | 29,533 | 27,537 | -7 |

See notes 1, 2 and 3, Table A2.1.

Table A2.3d
 Say District
 Use of the Public Health Facilities
 Number of Initial Visits for the Treatment of Illnesses
 By Type of Health Facility

| Month | TYPE OF HEALTH FACILITY | | | | | | | | |
|---------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|
| | Medical Center | | | Medical Post | | | Rural Dispensaries | | |
| | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % |
| MAY | 1.360 | 1.225 | -10 | 762 | 1.413 | 85 | 2.157 | 2.282 | 6 |
| JUNE | 1.564 | 972 | -38 | 753 | 1.129 | 50 | 2.084 | 1.880 | -10 |
| JULY | 1.808 | 1.136 | -37 | 983 | 1.096 | 11 | 2.646 | 1.628 | -38 |
| AUGUST | 1.650 | 1.969 | 19 | 1.212 | 1.508 | 24 | 2.763 | 2.023 | -27 |
| SEPTEMBER | 1.331 | 1.442 | 8 | 1.725 | 1.342 | -22 | 2.861 | 1.841 | -36 |
| OCTOBER | 1.672 | 1.762 | 5 | 1.743 | 1.552 | -11 | 3.014 | 2.487 | -17 |
| NOVEMBER | 1.948 | 1.400 | -28 | 1.150 | 1.236 | 7 | 2.606 | 2.220 | -15 |
| DECEMBER | 1.392 | 1.308 | -6 | 1.022 | 926 | -9 | 2.030 | 2.165 | 7 |
| JANUARY | 1.134 | 1.506 | 33 | 988 | 868 | -12 | 2.275 | 2.017 | -11 |
| FEBRUARY | 848 | 1.334 | 57 | 1.009 | 862 | -15 | 1.864 | 2.046 | 10 |
| PERIOD | 14,707 | 14,054 | -4 | 11,347 | 11,932 | 5 | 24,300 | 20,589 | -15 |

See notes 1, 2 and 3, Table A2.1.

Table A2.3e
 Say District
 Use of the Public Health Facilities
 Number of Return Visits for the Treatment of Illnesses
 By Type of Health Facility

| Month | TYPE OF HEALTH FACILITY | | | | | | | | |
|---------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|
| | Medical Center | | | Medical Post | | | Rural Dispensaries | | |
| | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % |
| MAY | 973 | 767 | -21 | 773 | 1,630 | 111 | 2,360 | 3,223 | 37 |
| JUNE | 1,119 | 734 | -34 | 613 | 1,449 | 136 | 1,950 | 3,375 | 73 |
| JULY | 1,396 | 1,041 | -25 | 640 | 1,096 | 71 | 2,248 | 2,647 | 18 |
| AUGUST | 1,275 | 1,645 | 29 | 790 | 1,387 | 76 | 2,571 | 3,480 | 35 |
| SEPTEMBER | 492 | 1,252 | 154 | 907 | 1,472 | 62 | 2,826 | 3,053 | 8 |
| OCTOBER | 693 | 1,012 | 46 | 973 | 1,552 | 60 | 3,413 | 4,317 | 26 |
| NOVEMBER | 680 | 1,029 | 51 | 774 | 1,430 | 85 | 2,801 | 3,985 | 42 |
| DECEMBER | 686 | 1,139 | 66 | 766 | 904 | 18 | 2,279 | 3,835 | 68 |
| JANUARY | 439 | 1,270 | 189 | 797 | 756 | -5 | 2,001 | 3,650 | 82 |
| FEBRUARY | 487 | 1,345 | 176 | 830 | 784 | -6 | 2,392 | 3,830 | 60 |
| PERIOD | 8,240 | 11,234 | 36 | 7,863 | 12,460 | 58 | 24,841 | 35,395 | 42 |

See notes 1, 2 and 3, Table A2.1.

Table A2.3f
 Say District
 Use of the Public Health Facilities
 Number of Visits for the Treatment of Illnesses
 By Type of Health Facility

| Month | TYPE OF HEALTH FACILITY | | | | | | | | |
|---------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|
| | Medical Center | | | Medical Post | | | Rural Dispensaries | | |
| | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % |
| MAY | 2,333 | 1,992 | -15 | 1,535 | 3,043 | 98 | 4,517 | 5,505 | 22 |
| JUNE | 2,683 | 1,706 | -36 | 1,366 | 2,578 | 89 | 4,034 | 5,255 | 30 |
| JULY | 3,204 | 2,177 | -32 | 1,623 | 2,192 | 35 | 4,894 | 4,275 | -13 |
| AUGUST | 2,925 | 3,614 | 24 | 2,002 | 2,895 | 45 | 5,334 | 5,503 | 3 |
| SEPTEMBER | 1,823 | 2,694 | 48 | 2,632 | 2,814 | 7 | 5,687 | 4,894 | -14 |
| OCTOBER | 2,365 | 2,774 | 17 | 2,716 | 3,104 | 14 | 6,427 | 6,804 | 6 |
| NOVEMBER | 2,628 | 2,429 | -8 | 1,924 | 2,666 | 39 | 5,407 | 6,205 | 15 |
| DECEMBER | 2,078 | 2,447 | 18 | 1,788 | 1,830 | 2 | 4,309 | 6,000 | 39 |
| JANUARY | 1,573 | 2,776 | 76 | 1,785 | 1,624 | -9 | 4,276 | 5,667 | 33 |
| FEBRUARY | 1,335 | 2,679 | 101 | 1,839 | 1,646 | -10 | 4,256 | 5,876 | 38 |
| PERIOD | 22,947 | 25,288 | 10 | 19,210 | 24,392 | 27 | 49,141 | 55,984 | 14 |

See notes 1, 2 and 3, Table A2.1.

Table A2.3g
 Boboye District
 Use of the Public Health Facilities
 Number of Initial Visits for the Treatment of Illnesses
 By Type of Health Facility

| Month | TYPE OF HEALTH FACILITY | | | | | | | | |
|---------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|
| | Medical Center | | | Medical Post | | | Rural Dispensaries | | |
| | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % |
| MAY | 1,291 | 1,959 | 52 | 433 | 1,366 | 215 | 6,319 | 7,707 | 22 |
| JUNE | 543 | 1,690 | 211 | 331 | 1,002 | 203 | 4,685 | 6,827 | 46 |
| JULY | 1,384 | 1,560 | 13 | 365 | 675 | 85 | 5,296 | 5,395 | 2 |
| AUGUST | 1,705 | 2,097 | 23 | 524 | 1,134 | 116 | 6,739 | 7,450 | 11 |
| SEPTEMBER | 1,766 | 2,178 | 23 | 522 | 1,002 | 92 | 6,430 | 8,219 | 28 |
| OCTOBER | 1,553 | 2,679 | 73 | 897 | 1,188 | 32 | 6,541 | 7,615 | 16 |
| NOVEMBER | 1,289 | 2,208 | 71 | 467 | 1,225 | 162 | 6,368 | 6,798 | 7 |
| DECEMBER | 1,370 | 2,244 | 64 | 349 | 1,181 | 238 | 5,287 | 6,858 | 30 |
| JANUARY | 899 | 2,370 | 164 | 159 | 1,240 | 680 | 3,797 | 6,544 | 72 |
| FEBRUARY | 1,269 | 1,811 | 43 | 178 | 1,229 | 590 | 4,366 | 6,426 | 47 |
| PERIOD | 13,069 | 20,796 | 59 | 4,225 | 11,242 | 166 | 55,828 | 69,839 | 25 |

See notes 1, 2 and 3, Table A2.1.

Table A2.3h
 Boboye District
 Use of the Public Health Facilities
 Number of Return Visits for the Treatment of Illnesses
 By Type of Health Facility

| Month | TYPE OF HEALTH FACILITY | | | | | | | | |
|---------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|
| | Medical Center | | | Medical Post | | | Rural Dispensaries | | |
| | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % |
| MAY | 701 | 1.044 | 49 | 340 | 1.267 | 273 | 4.414 | 8.774 | 99 |
| JUNE | 100 | 900 | 800 | 163 | 1.120 | 587 | 3.874 | 7.857 | 103 |
| JULY | 1.018 | 1.281 | 26 | 67 | 621 | 827 | 4.325 | 7.300 | 69 |
| AUGUST | 1.204 | 1.558 | 29 | 96 | 1.193 | 1.143 | 5.457 | 8.522 | 56 |
| SEPTEMBER | 1.322 | 1.426 | 8 | 96 | 1.306 | 1.260 | 4.537 | 10.342 | 128 |
| OCTOBER | 1.535 | 1.735 | 13 | 818 | 1.138 | 39 | 4.197 | 9.945 | 137 |
| NOVEMBER | 1.260 | 2.068 | 64 | 525 | 1.301 | 148 | 4.548 | 9.334 | 105 |
| DECEMBER | 1.181 | 1.539 | 30 | 388 | 1.232 | 218 | 3.903 | 10.123 | 159 |
| JANUARY | 569 | 1.495 | 163 | 144 | 1.521 | 956 | 2.614 | 9.855 | 277 |
| FEBRUARY | 803 | 1.370 | 71 | 203 | 1.507 | 642 | 3.328 | 8.790 | 164 |
| PERIOD | 9.693 | 14.416 | 49 | 2.840 | 12.206 | 330 | 41.197 | 90.842 | 121 |

See notes 1, 2 and 3, Table A2.1.

Table A2.3i
 Boboye District
 Use of the Public Health Facilities
 Number of Visits for the Treatment of Illnesses
 By Type of Health Facility

| Month | TYPE OF HEALTH FACILITY | | | | | | | | |
|---------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------|
| | Medical Center | | | Medical Post | | | Rural Dispensaries | | |
| | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % | BEFORE PILOT TESTS | DURING PILOT TESTS | Rate of Change % |
| MAY | 1,992 | 3,003 | 51 | 773 | 2,633 | 241 | 10,733 | 16,481 | 54 |
| JUNE | 643 | 2,590 | 303 | 494 | 2,122 | 330 | 8,559 | 14,684 | 72 |
| JULY | 2,402 | 2,841 | 18 | 432 | 1,296 | 200 | 9,621 | 12,695 | 32 |
| AUGUST | 2,909 | 3,655 | 26 | 620 | 2,327 | 275 | 12,196 | 15,972 | 31 |
| SEPTEMBER | 3,088 | 3,604 | 17 | 618 | 2,308 | 273 | 10,967 | 18,561 | 69 |
| OCTOBER | 3,088 | 4,414 | 43 | 1,715 | 2,326 | 36 | 10,738 | 17,560 | 64 |
| NOVEMBER | 2,549 | 4,276 | 68 | 992 | 2,526 | 155 | 10,916 | 16,132 | 48 |
| DECEMBER | 2,551 | 3,783 | 48 | 737 | 2,413 | 227 | 9,190 | 16,981 | 85 |
| JANUARY | 1,468 | 3,865 | 163 | 303 | 2,761 | 811 | 6,411 | 16,399 | 156 |
| FEBRUARY | 2,072 | 3,181 | 54 | 381 | 2,736 | 618 | 7,694 | 15,216 | 98 |
| PERIOD | 22,762 | 35,212 | 55 | 7,065 | 23,448 | 232 | 97,025 | 160,681 | 66 |

See notes 1, 2 and 3, Table A2.1.

Table A3.1a
Amount Spent Monthly on Medicines (CFA F)
Boboye and Say Medical Districts
May 1993 - February 1994

| Month | MEDICAL DISTRICT | | | | | |
|---------------|------------------|-----------------------------------|-------------------|-------------------|-----------------------------------|-------------------|
| | SAY - DIRECT | | | BOBOYE - INDIRECT | | |
| | INITIAL VISITS | AMOUNT SPENT ON MEDICINES (CFA F) | CFA F PER ILLNESS | INITIAL VISITS | AMOUNT SPENT ON MEDICINES (CFA F) | CFA F PER ILLNESS |
| MAY | 4.920 | 1.279.621 | 260 | 11.032 | 1.304.429 | 118 |
| JUNE | 3.981 | 1.157.045 | 290 | 9.519 | 1.131.983 | 118 |
| JULY | 3.860 | 1.232.151 | 319 | 7.630 | 1.056.897 | 138 |
| AUGUST | 5.500 | 1.515.012 | 275 | 10.681 | 1.162.594 | 108 |
| SEPTEMBER | 4.625 | 1.380.833 | 298 | 11.399 | 1.107.431 | 97 |
| OCTOBER | 5.801 | 1.376.612 | 237 | 11.482 | 986.522 | 85 |
| NOVEMBER | 4.856 | 1.411.632 | 290 | 10.231 | 1.134.922 | 110 |
| DECEMBER | 4.399 | 1.031.736 | 234 | 10.283 | 1.106.522 | 107 |
| JANUARY | 4.391 | 912.794 | 207 | 10.154 | 1.103.472 | 108 |
| FEBRUARY | 4.242 | 1.405.161 | 331 | 9.466 | 939.833 | 99 |
| PERIOD | 46.575 | 12.702.597 | 272 | 101.877 | 11.034.607 | 108 |

Table A3.1b
 Say Medical District
 Amount Spent Monthly on Medicines (CFA F)
 By Type of Health Facility
 May 1993 - February 1994

| Month | TYPE OF HEALTH FACILITY | | | | | | | | |
|---------------|-------------------------|------------------------------|----------------|----------------|------------------------------|----------------|--------------------|------------------------------|----------------|
| | Medical Center | | | Medical Post | | | Rural Dispensaries | | |
| | INITIAL VISITS | AMOUNT FOR MEDICINES (CFA F) | CFA F/ ILLNESS | INITIAL VISITS | AMOUNT FOR MEDICINES (CFA F) | CFA F/ ILLNESS | INITIAL VISITS | AMOUNT FOR MEDICINES (CFA F) | CFA F/ ILLNESS |
| MAY | 1,225 | 255,917 | 208 | 1,413 | 410,530 | 290 | 2,282 | 613,174 | 268 |
| JUNE | 972 | 189,489 | 194 | 1,129 | 344,833 | 305 | 1,880 | 622,723 | 331 |
| JULY | 1,136 | 210,414 | 185 | 1,096 | 398,844 | 363 | 1,628 | 622,893 | 382 |
| AUGUST | 1,969 | 319,020 | 162 | 1,508 | 430,278 | 285 | 2,023 | 765,714 | 378 |
| SEPTEMBER | 1,442 | 351,688 | 243 | 1,342 | 381,206 | 284 | 1,841 | 647,938 | 351 |
| OCTOBER | 1,762 | 375,130 | 212 | 1,552 | 476,737 | 307 | 2,487 | 524,744 | 210 |
| NOVEMBER | 1,400 | 366,521 | 261 | 1,236 | 529,933 | 428 | 2,220 | 515,168 | 232 |
| DECEMBER | 1,308 | 421,568 | 322 | 926 | 149,805 | 161 | 2,165 | 460,364 | 212 |
| JANUARY | 1,506 | 352,884 | 234 | 868 | 124,518 | 143 | 2,017 | 435,392 | 215 |
| FEBRUARY | 1,334 | 325,174 | 243 | 862 | 682,811 | 792 | 2,046 | 397,176 | 194 |
| PERIOD | 14,054 | 3,167,815 | 225 | 11,932 | 3,929,496 | 329 | 20,589 | 5,605,297 | 272 |

Table A3.1c
 Boboye Medical District
 Amount Spent Monthly on Medicines (CFA F)
 By Type of Health Facility
 May 1993 - February 1994

| Month | TYPE OF HEALTH FACILITY | | | | | | | | |
|-----------|-------------------------|------------------------------|----------------|----------------|------------------------------|----------------|--------------------|------------------------------|----------------|
| | Medical Center | | | Medical Post | | | Rural Dispensaries | | |
| | INITIAL VISITS | AMOUNT FOR MEDICINES (CFA F) | CFA F/ ILLNESS | INITIAL VISITS | AMOUNT FOR MEDICINES (CFA F) | CFA F/ ILLNESS | INITIAL VISITS | AMOUNT FOR MEDICINES (CFA F) | CFA F/ ILLNESS |
| MAY | 1.959 | 187.210 | 95 | 1.366 | 100.455 | 73 | 7.707 | 1.015.765 | 131 |
| JUNE | 1.690 | 125.045 | 73 | 1.002 | 120.346 | 120 | 6.827 | 886.593 | 129 |
| JULY | 1.560 | 192.973 | 123 | 675 | 61.563 | 91 | 5.395 | 802.361 | 148 |
| AUGUST | 2.097 | 322.210 | 153 | 1.134 | 131.559 | 116 | 7.450 | 708.826 | 95 |
| SEPTEMBER | 2.178 | 217.708 | 99 | 1.002 | 121.453 | 121 | 8.219 | 768.270 | 93 |
| OCTOBER | 2.679 | 197.573 | 73 | 1.188 | 103.207 | 86 | 7.615 | 685.742 | 90 |
| NOVEMBER | 2.208 | 215.707 | 97 | 1.225 | 136.919 | 111 | 6.798 | 782.297 | 115 |
| DECEMBER | 2.244 | 281.939 | 125 | 1.181 | 146.549 | 124 | 6.858 | 678.035 | 98 |
| JANUARY | 2.370 | 260.642 | 109 | 1.240 | 120.945 | 97 | 6.544 | 721.886 | 110 |
| FEBRUARY | 1.811 | 100.712 | 105 | 1.229 | 115.242 | 93 | 6.426 | 633.878 | 98 |
| PERIOD | 20.796 | 2.191.717 | 105 | 11.242 | 1.158.236 | 103 | 69.839 | 7.684.653 | 110 |

Table A3.1d
Amount Spent on Medicines (CFA F)
By Health Facility
May 1993 - February 1994

| Health Facility | INITIAL VISITS | AMOUNT FOR MEDICINES (CFA F) | CFA F PER ILLNESS |
|--------------------------------|-------------------|------------------------------------|----------------------|
| SAY MEDICAL DISTRICT | | | |
| Say MC | 14.054 | 3.167.815 | 225 |
| Torodi MP | 11.932 | 3.929.496 | 329 |
| Bolsi RD | 2.984 | 1.337.369 | 448 |
| Gueladjo RD | 3.242 | 805.910 | 248 |
| Makalondi RD | 6.716 | 1.382.848 | 205 |
| Tombole RD | 2.505 | 656.332 | 262 |
| Tamou RD | 3.938 | 1.094.853 | 278 |
| Tapoa RD | 1.204 | 327.974 | 272 |
| SAY MD - TOTAL | 46,575 | 12,702,597 | 272 |
| BOBOYE MEDICAL DISTRICT | | | |
| Birni MC | 20.796 | 2.191.717 | 105 |
| Falmey MP | 11.242 | 1.158.236 | 103 |
| Bélandé RD | 11.147 | 1.183.484 | 106 |
| Fabidji RD | 10.589 | 1.000.367 | 94 |
| Harikanassou RD | 9.824 | 1.354.295 | 137 |
| Kiota RD | 12.236 | 1.241.849 | 101 |
| Koissi RD | 7.365 | 914.566 | 124 |
| Koygolo RD | 5.932 | 627.962 | 105 |
| Tonkassare RD | 4.354 | 385.877 | 88 |
| Yéni RD | 8.392 | 976.254 | 116 |
| BOBOYE MD - TOTAL | 101,877 | 11,034,607 | 108 |

Table A3.4a
Amount Spent Monthly on Medicines (CFA F) by Type of Medicine
Say Medical District
May 1993 - February 1994

| Month | TYPE OF MEDICINE | | | | | TOTAL |
|---------------|------------------|------------------|----------------|------------------|----------------|-------------------|
| | ANTI-BIOTIC | ANTI-PARASITIC | ANTI-DIARRHEAL | OTHER MEDICINES | SUPPLIES | |
| MAY | 689.484 | 188.566 | 41.688 | 265.890 | 93.993 | 1,279.621 |
| JUNE | 718.075 | 159.118 | 13.293 | 186.534 | 80.025 | 1,157.045 |
| JULY | 671.243 | 245.375 | 51.070 | 173.058 | 91.405 | 1,232.151 |
| AUGUST | 641.001 | 563.276 | 45.465 | 184.453 | 80.818 | 1,515.012 |
| SEPTEMBER | 627.998 | 477.992 | 21.398 | 177.115 | 76.330 | 1,380.833 |
| OCTOBER | 405.420 | 508.283 | 107.813 | 340.668 | 14.428 | 1,376.612 |
| NOVEMBER | 436.451 | 584.171 | 98.029 | 289.629 | 3.352 | 1,411.632 |
| DECEMBER | 521.573 | 227.354 | 118.880 | 162.643 | 1.285 | 1,031.736 |
| JANUARY | 450.442 | 226.196 | 55.351 | 175.638 | 5.166 | 912.794 |
| FEBRUARY | 495.417 | 720.330 | 66.147 | 120.807 | 2.461 | 1,405.161 |
| PERIOD | 5,657.104 | 3,900,662 | 619,134 | 2,076,435 | 449,263 | 12,702,597 |

Table A3.4b
Amount Spent Monthly on Medicines (CFA F) by Type of Medicine
Boboye Medical District
May 1993 - February 1994

| Month | TYPE OF MEDICINE | | | | | TOTAL |
|---------------|------------------|------------------|----------------|------------------|----------------|-------------------|
| | ANTI-BIOTIC | ANTI-PARASITIC | ANTI-DIARRHEAL | OTHER MEDICINES | SUPPLIES | |
| MAY | 734.918 | 198.527 | 21.990 | 260.148 | 88.846 | 1.304.429 |
| JUNE | 630.687 | 157.619 | 21.895 | 236.498 | 85.284 | 1.131.983 |
| JULY | 645.903 | 177.160 | 35.432 | 166.373 | 32.029 | 1.056.897 |
| AUGUST | 513.349 | 294.265 | 27.957 | 291.170 | 35.854 | 1.162.594 |
| SEPTEMBER | 517.405 | 232.562 | 29.256 | 295.750 | 32.458 | 1.107.431 |
| OCTOBER | 472.432 | 261.082 | 23.735 | 196.432 | 32.841 | 986.522 |
| NOVEMBER | 560.331 | 268.979 | 45.776 | 197.252 | 62.585 | 1.134.922 |
| DECEMBER | 520.149 | 241.806 | 73.364 | 207.164 | 64.041 | 1.106.522 |
| JANUARY | 494.427 | 244.840 | 57.620 | 247.906 | 58.680 | 1.103.472 |
| FEBRUARY | 444.449 | 228.747 | 26.296 | 202.074 | 38.267 | 939.833 |
| PERIOD | 5,534,050 | 2,305,586 | 363,321 | 2,300,766 | 530,884 | 11,034,607 |

Table A3.4c
Amount Spent (CFA F) by Type of Medicine and Form of Administration
Say and Boboye Medical Districts
May 1993 - February 1994

| FORM OF ADMINISTRATION | TYPE OF MEDICINE | | | | SUPPLIES | TOTAL |
|--------------------------------|------------------|------------------|----------------|------------------|----------------|-------------------|
| | ANTI-BIOTIC | ANTI-PARASITIC | ANTI-DIARRHEAL | OTHER MEDICINES | | |
| SAY MEDICAL DISTRICT | | | | | | |
| ORAL | 2,219,746 | 1,696,745 | 86,755 | 1,534,926 | - | 5,538,172 |
| INJECTIONS | 3,437,358 | 2,190,697 | 419,739 | 477,474 | - | 6,525,268 |
| TOPICAL | - | - | - | 64,035 | - | 64,035 |
| SUPPLIES | - | 13,219 | 112,640 | - | 449,263 | 575,122 |
| TOTAL - SAY MD | 5,657,104 | 3,900,662 | 619,134 | 2,076,435 | 449,263 | 12,702,597 |
| BOBOYE MEDICAL DISTRICT | | | | | | |
| ORAL | 2,070,032 | 1,090,447 | 270,844 | 1,409,500 | - | 4,840,822 |
| INJECTIONS | 3,464,018 | 1,185,923 | 70,477 | 785,159 | - | 5,505,577 |
| TOPICAL | - | - | - | 106,107 | - | 106,107 |
| SUPPLIES | - | 29,216 | 22,000 | - | 530,884 | 582,100 |
| TOTAL - BOBOYE MD | 5,534,050 | 2,305,586 | 363,321 | 2,300,766 | 530,884 | 11,034,607 |

Table A4.1a
 Monthly Receipts (CFA F) from Cost Recovery
 Say District - Direct
 May 1993 - February 1994

| Month | INITIAL VISITS | RECEIPTS: PAYMENT FROM USERS (CFA F) | AVERAGE RECEIPTS/ ILLNESS (CFA F) |
|---------------|-------------------|---|--|
| MAY | 4.327 | 672.800 | 155 |
| JUNE | 3.989 | 628.700 | 157 |
| JULY | 3.860 | 625.500 | 162 |
| AUGUST | 5.500 | 845.700 | 153 |
| SEPTEMBER | 4.625 | 701.100 | 151 |
| OCTOBER | 5.801 | 753.200 | 129 |
| NOVEMBER | 4.856 | 507.300 | 125 |
| DECEMBER | 4.399 | 599.200 | 136 |
| JANUARY | 4.391 | 557.100 | 126 |
| FEBRUARY | 4.242 | 584.300 | 137 |
| PERIOD | 45,990 | 6,574,900 | 142 |

Table A4.1b
 Monthly Receipts (CFA F) from Cost Recovery
 Boboye District - Indirect
 May 1993 - February 1994

| Month | INITIAL VISITS | RECEIPTS: PAYMENT FROM USERS (CFA F) | AMOUNT FROM TAX ¹ (CFA F) | TOTAL RECEIPTS (CFA F) | AVERAGE RECEIPTS/ ILLNESS (CFA F) |
|---------------|-------------------|---|--|------------------------------|--|
| MAY | 9.591 | 371.950 | 1.200.000 | 1.571.950 | 163 |
| JUNE | 9.517 | 370.750 | 1.200.000 | 1.570.750 | 165 |
| JULY | 7.630 | 301.150 | 1.550.000 | 1.851.150 | 242 |
| AUGUST | 10.688 | 412.775 | 1.550.000 | 1.962.775 | 183 |
| SEPTEMBER | 11.399 | 435.425 | 1.550.000 | 1.985.425 | 174 |
| OCTOBER | 11.482 | 405.725 | 1.200.000 | 1.605.725 | 139 |
| NOVEMBER | 10.231 | 348.725 | 1.200.000 | 1.548.725 | 151 |
| DECEMBER | 10.283 | 361.900 | 1.200.000 | 1.561.900 | 151 |
| JANUARY | 10.154 | 356.125 | 1.050.000 | 1.406.125 | 138 |
| FEBRUARY | 9.466 | 344.750 | 1.050.000 | 1.394.750 | 147 |
| PERIOD | 100,441 | 3,709,275 | 12,750,000 | 16,459,275 | 163 |

1. Receipts from the tax are divided into quarters on the working hypothesis that the tax can be distributed proportionally according to the number of new clients during a given quarter. The SNIS data for 1992 were used to calculate the distribution.

Table A4.3
 Receipts (CFA F) from Cost Recovery
 by Health Facility: Payment from Users
 May 1993 - February 1994

| Health Facility | INITIAL VISITS | PAYMENT FROM USERS (CFA F) | AVERAGE RECEIPTS/ ILLNESS (CFA F) |
|--------------------------------|----------------|-------------------------------|---|
| SAY MEDICAL DISTRICT | | | |
| Say MC | 13.869 | 1.773.200 | 127 |
| Torodi MP | 11.831 | 1.695.900 | 143 |
| Bolsi RD | 2.984 | 512.500 | 171 |
| Gueladjo RD | 3.121 | 388.900 | 124 |
| Makalondi RD | 6.530 | 992.100 | 151 |
| Tombole RD | 2.513 | 403.700 | 160 |
| Tamou RD | 3.938 | 612.800 | 155 |
| Tapoa RD | 1.204 | 195.800 | 162 |
| MEDICAL DISTRICT | 45.990 | 6.574.900 | 142 |
| BOBOYE MEDICAL DISTRICT | | | |
| Birni MC | 20.288 | 691.700 | 34 |
| Falmey MP | 11.114 | 387.225 | 34 |
| Bélandé RD | 10.668 | 397.175 | 37 |
| Fabidji RD | 10.589 | 413.375 | 39 |
| Harikanassou RD | 9.655 | 370.175 | 38 |
| Kiota RD | 12.236 | 460.000 | 37 |
| Koissi RD | 7.090 | 274.300 | 38 |
| Koygolo RD | 5.932 | 217.475 | 36 |
| Tonkassare RD | 4.477 | 174.500 | 38 |
| Yéni RD | 8.392 | 323.350 | 38 |
| MEDICAL DISTRICT | 100.441 | 3.709.275 | 37 |

Table A4.4a
Amount of Monthly Exemptions by Exemption Category
Say District - Direct
May 1993 - February 1994

| Month | STUDENT CATEGORY | DISABLED CATEGORY | INDIGENT CATEGORY | CATEGORY OF OTHER EXEMPTIONS | TOTAL EXEMPTIONS (CFA F) | RATIO EXEMPTIONS/ RECEIPTS (%) |
|---------------|---------------------|----------------------|----------------------|------------------------------------|--------------------------------|---|
| MAY | 42.800 | 2.200 | 2.600 | 11.200 | 58.800 | 9 |
| JUNE | 29.400 | 2.200 | 1.000 | 25.800 | 58.400 | 9 |
| JULY | 5.800 | 1.600 | 2.200 | 21.000 | 30.600 | 5 |
| AUGUST | 1.000 | 400 | 800 | 35.200 | 37.400 | 4 |
| SEPTEMBER | 1.200 | 1.400 | 600 | 36.400 | 39.600 | 6 |
| OCTOBER | 173.400 | 2.200 | 1.200 | 30.800 | 207.600 | 28 |
| NOVEMBER | 198.200 | 1.000 | 1.200 | 26.400 | 226.800 | 37 |
| DECEMBER | 118.200 | 1.800 | 1.200 | 28.400 | 149.600 | 25 |
| JANUARY | 174.000 | 2.000 | 2.800 | 19.800 | 198.600 | 36 |
| FEBRUARY | 124.000 | 1.600 | 1.800 | 20.200 | 147.600 | 25 |
| PERIOD | 868.000 | 16.400 | 15.400 | 255.200 | 1,155.000 | 18 |

Table A4.4b
Amount of Monthly Exemptions by Exemption Category
Boboye District - Indirect
May 1993 - February 1994

| Month | STUDENT CATEGORY | DISABLED CATEGORY | INDIGENT CATEGORY | CATEGORY OF OTHER EXEMPTIONS | TOTAL EXEMPTIONS (CFA F) | RATIO EXEMPTIONS/ RECEIPTS (%) |
|---------------|---------------------|----------------------|----------------------|------------------------------------|--------------------------------|---|
| MAY | 17.950 | 1.400 | 350 | 8.950 | 28.650 | 2 |
| JUNE | 16.700 | 2.350 | 1.200 | 8.750 | 29.000 | 2 |
| JULY | 6.400 | 1.700 | 600 | 8.950 | 17.650 | 1 |
| AUGUST | 6.450 | 1.800 | 1.100 | 12.350 | 21.700 | 1 |
| SEPTEMBER | 6.150 | 1.400 | 1.100 | 10.600 | 19.250 | 1 |
| OCTOBER | 60.500 | 1.300 | 550 | 8.150 | 70.500 | 4 |
| NOVEMBER | 75.000 | 850 | 250 | 8.050 | 84.150 | 5 |
| DECEMBER | 56.550 | 1.650 | 200 | 5.950 | 64.350 | 4 |
| JANUARY | 65.050 | 4.050 | 550 | 7.500 | 77.150 | 5 |
| FEBRUARY | 49.400 | 1.250 | 300 | 21.650 | 72.600 | 5 |
| PERIOD | 360.150 | 17.750 | 6.200 | 100.900 | 485.000 | 3 |

Table A4.5
 Monthly Pattern in the Geographic Origin of Initial Visits
 by District
 May 1993 - February 1994

| Month | MEDICAL DISTRICT | | | | | | | |
|---------------|-------------------------|---------------|--------------|------------|-------------------------|---------------|--------------|------------|
| | SAY - Direct | | | | BOBOYE - Indirect | | | |
| | LOCATION OF HEALTH FAC. | SAME DISTRICT | OTHER ORIGIN | TOTAL | LOCATION OF HEALTH FAC. | SAME DISTRICT | OTHER ORIGIN | TOTAL |
| MAY | 59 | 36 | 4 | 100 | 52 | 42 | 6 | 100 |
| JUNE | 50 | 45 | 4 | 100 | 48 | 45 | 8 | 100 |
| JULY | 48 | 45 | 7 | 100 | 45 | 43 | 12 | 100 |
| AUGUST | 45 | 47 | 7 | 100 | 46 | 44 | 10 | 100 |
| SEPTEMBER | 47 | 47 | 6 | 100 | 46 | 45 | 9 | 100 |
| OCTOBER | 49 | 46 | 6 | 100 | 48 | 45 | 7 | 100 |
| NOVEMBER | 49 | 45 | 5 | 100 | 49 | 45 | 6 | 100 |
| DECEMBER | 43 | 51 | 6 | 100 | 47 | 48 | 6 | 100 |
| JANUARY | 47 | 46 | 7 | 100 | 46 | 48 | 6 | 100 |
| FEBRUARY | 44 | 47 | 8 | 100 | 42 | 50 | 7 | 100 |
| PERIOD | 48 | 46 | 6 | 100 | 47 | 46 | 7 | 100 |

Table A5.1a
 Operating Costs (CFA F) with the Institution of Cost Recovery
 Say Medical District - Direct Payment Method
 May 1993 - February 1994

| Month | AMOUNT FOR MEDICINES | INCREMENTAL ADMINISTRATIVE COSTS (Cost. Recovery) | OTHER OPERATING EXPENSES | OPERATING COSTS |
|---------------|-------------------------|--|--------------------------------|--------------------|
| MAY | 1.279.621 | 559.308 | 2.394.741 | 4.233.670 |
| JUNE | 1.157.045 | 629.495 | 2.502.940 | 4.289.480 |
| JULY | 1.232.151 | 628.547 | 2.505.840 | 4.366.538 |
| AUGUST | 1.515.012 | 600.898 | 2.439.068 | 4.554.978 |
| SEPTEMBER | 1.380.833 | 594.467 | 2.400.650 | 4.375.950 |
| OCTOBER | 1.376.612 | 603.110 | 2.400.650 | 4.380.372 |
| NOVEMBER | 1.411.632 | 563.156 | 2.400.650 | 4.375.438 |
| DECEMBER | 1.031.736 | 559.797 | 2.400.650 | 3.992.183 |
| JANUARY | 912.794 | 559.738 | 2.400.650 | 3.873.182 |
| FEBRUARY | 1.405.161 | 558.643 | 2.400.650 | 4.364.454 |
| PERIOD | 12.702.597 | 5.857.159 | 24.246.489 | 42.806.245 |

Table A5.1b
 Operating Costs (CFA F) with the Institution of Cost Recovery
 Boboye Medical District - Indirect Payment Method
 May 1993 - February 1994

| Month | AMOUNT FOR MEDICINES | INCREMENTAL ADMINISTRATIVE COSTS (Cost Recovery) | OTHER OPERATING EXPENSES | OPERATING COSTS |
|---------------|-------------------------|---|--------------------------------|--------------------|
| MAY | 1,304,429 | 776,628 | 3,037,219 | 5,118,276 |
| JUNE | 1,131,983 | 776,084 | 3,037,219 | 4,945,286 |
| JULY | 1,056,897 | 762,215 | 2,994,500 | 4,813,612 |
| AUGUST | 1,162,594 | 770,402 | 2,793,178 | 4,726,174 |
| SEPTEMBER | 1,107,431 | 775,628 | 2,832,965 | 4,716,024 |
| OCTOBER | 986,522 | 776,238 | 2,801,326 | 4,564,086 |
| NOVEMBER | 1,134,922 | 728,662 | 2,801,326 | 4,664,910 |
| DECEMBER | 1,106,522 | 729,044 | 2,801,326 | 4,636,892 |
| JANUARY | 1,103,472 | 728,096 | 2,801,326 | 4,632,894 |
| FEBRUARY | 939,833 | 723,039 | 2,801,326 | 4,464,198 |
| PERIOD | 11,034,607 | 7,546,036 | 28,701,711 | 47,282,354 |

Table A5.2a
 Incremental Administrative Costs (CFA F) from Cost Recovery
 Say Medical District - Direct Payment Method
 May 1993 - February 1994

| Month | ITEMS | | | | INCREMENTAL ADMINISTRATIVE COSTS |
|---------------|-----------------------------|--------------------|---------------------------|-----------------|--|
| | ADMINISTRATIVE MATERIALS | ADMIN. SUPPLIES | ADMIN. SALARY COSTS | BANKING FEES | |
| MAY | 125.153 | 87.214 | 346.781 | 160 | 559.308 |
| JUNE | 134.077 | 99.673 | 395.585 | 160 | 629.495 |
| JULY | 133.129 | 99.673 | 395.585 | 160 | 628.547 |
| AUGUST | 145.183 | 59.970 | 395.585 | 160 | 600.898 |
| SEPTEMBER | 138.752 | 59.970 | 395.585 | 160 | 594.467 |
| OCTOBER | 147.395 | 59.970 | 395.585 | 160 | 603.110 |
| NOVEMBER | 140.450 | 26.961 | 395.585 | 160 | 563.156 |
| DECEMBER | 137.091 | 26.961 | 395.585 | 160 | 559.797 |
| JANUARY | 137.032 | 26.961 | 395.585 | 160 | 559.738 |
| FEBRUARY | 135.937 | 26.961 | 395.585 | 160 | 558.643 |
| PERIOD | 1,374,199 | 574,314 | 3,907,046 | 1,600 | 5,857,159 |

Table A5.2b
 Incremental Administrative Costs (CFA F) from Cost Recovery
 Boboeye Medical District - Indirect Payment Method
 May 1993 - February 1994

| Month | ITEMS | | | | INCREMENTAL ADMINISTRATIVE COSTS |
|---------------|-----------------------------|--------------------|---------------------------|-----------------|--|
| | ADMINISTRATIVE MATERIALS | ADMIN. SUPPLIES | ADMIN. SALARY COSTS | BANKING FEES | |
| MAY | 198,068 | 85,207 | 493,193 | 160 | 776,628 |
| JUNE | 197,524 | 85,207 | 493,193 | 160 | 776,084 |
| JULY | 183,655 | 85,207 | 493,193 | 160 | 762,215 |
| AUGUST | 206,131 | 70,918 | 493,193 | 160 | 770,402 |
| SEPTEMBER | 211,357 | 70,918 | 493,193 | 160 | 775,628 |
| OCTOBER | 211,967 | 70,918 | 493,193 | 160 | 776,238 |
| NOVEMBER | 202,772 | 32,537 | 493,193 | 160 | 728,662 |
| DECEMBER | 203,154 | 32,537 | 493,193 | 160 | 729,044 |
| JANUARY | 202,206 | 32,537 | 493,193 | 160 | 728,096 |
| FEBRUARY | 197,149 | 32,537 | 493,193 | 160 | 723,039 |
| PERIOD | 2,013,983 | 598,523 | 4,931,930 | 1,600 | 7,546,036 |

Table A6.1
 Cost Recovery for Medicines Used to Provide Care
 by Medical District: May 1993 - February 1994

| Month | MEDICAL DISTRICT | | | | | |
|---------------|------------------|---------------------------|---------------------------------|-------------------|---------------------------|---------------------------------|
| | SAY - DIRECT | | | BOBOYE - INDIRECT | | |
| | TOTAL RECEIPTS | AMOUNT USED FOR MEDICINES | RECOVERY RATE FOR MEDICINES (%) | TOTAL RECEIPTS | AMOUNT USED FOR MEDICINES | RECOVERY RATE FOR MEDICINES (%) |
| | (CFA F) | (CFA F) | (%) | (CFA F) | (CFA F) | (%) |
| MAY | 672,800 | 1,279,621 | 53 | 1,571,950 | 1,304,429 | 121 |
| JUNE | 628,700 | 1,157,045 | 54 | 1,570,750 | 1,131,983 | 139 |
| JULY | 625,500 | 1,232,151 | 51 | 1,851,150 | 1,056,897 | 175 |
| AUGUST | 845,700 | 1,515,012 | 56 | 1,962,775 | 1,162,594 | 169 |
| SEPTEMBER | 701,100 | 1,380,833 | 51 | 1,985,425 | 1,107,431 | 179 |
| OCTOBER | 753,200 | 1,376,612 | 55 | 1,605,725 | 986,522 | 163 |
| NOVEMBER | 607,300 | 1,411,632 | 43 | 1,548,725 | 1,134,922 | 136 |
| DECEMBER | 599,200 | 1,031,736 | 58 | 1,561,900 | 1,106,522 | 141 |
| JANUARY | 557,100 | 912,794 | 61 | 1,406,125 | 1,103,472 | 127 |
| FEBRUARY | 584,300 | 1,405,161 | 42 | 1,394,750 | 939,833 | 148 |
| PERIOD | 6,574,900 | 12,702,597 | 52 | 16,459,275 | 11,034,607 | 149 |

Table A6.2
 Cost Recovery for Medicines and Administrative Costs
 by Medical District: May 1993 - February 1994

| Month | MEDICAL DISTRICT | | | | | |
|---------------|------------------|------------------------------|--|-------------------|------------------------------|--|
| | SAY - Direct | | | BOBOYE - Indirect | | |
| | TOTAL RECEIPTS | COSTS FOR MEDICINES + ADMIN. | RECOVERY RATE FOR MEDICINES + ADMINISTRATION | TOTAL RECEIPTS | COSTS FOR MEDICINES + ADMIN. | RECOVERY RATE FOR MEDICINES + ADMINISTRATION |
| | (CFA F) | (CFA F) | (%) | (CFA F) | (CFA F) | (%) |
| MAY | 672.800 | 1.838.929 | 37 | 1.571.950 | 2.081.057 | 76 |
| JUNE | 628.700 | 1.786.540 | 35 | 1.570.750 | 1.908.067 | 82 |
| JULY | 625.500 | 1.860.698 | 34 | 1.851.150 | 1.819.112 | 102 |
| AUGUST | 845.700 | 2.115.910 | 40 | 1.962.775 | 1.932.996 | 102 |
| SEPTEMBER | 701.100 | 1.975.300 | 35 | 1.985.425 | 1.883.059 | 105 |
| OCTOBER | 753.200 | 1.979.722 | 38 | 1.605.725 | 1.762.760 | 91 |
| NOVEMBER | 607.300 | 1.974.788 | 31 | 1.548.725 | 1.863.584 | 83 |
| DECEMBER | 599.200 | 1.591.533 | 38 | 1.561.900 | 1.835.566 | 85 |
| JANUARY | 557.100 | 1.472.532 | 38 | 1.406.125 | 1.831.568 | 77 |
| FEBRUARY | 584.300 | 1.963.804 | 30 | 1.394.750 | 1.662.872 | 84 |
| PERIOD | 6,574,900 | 18,559,756 | 35 | 16,459,275 | 18,580,643 | 89 |

Table A6.3
 Receipts from Cost Recovery and Operating Costs
 by Medical District: May 1993 - February 1994

| Month | MEDICAL DISTRICT | | | | | |
|-----------|------------------|-----------------|----------------------------------|-------------------|-----------------|----------------------------------|
| | SAY - Direct | | | BOBOYE - Indirect | | |
| | TOTAL RECEIPTS | OPERATING COSTS | RATIO: RECEIPTS/ OPERATING COSTS | TOTAL RECEIPTS | OPERATING COSTS | RATIO: RECEIPTS/ OPERATING COSTS |
| | (CFA F) | (CFA F) | (%) | (CFA F) | (CFA F) | (%) |
| MAY | 672.800 | 4.233.670 | 16 | 1.571.950 | 5.118.276 | 31 |
| JUNE | 628.700 | 4.289.480 | 15 | 1.570.750 | 4.945.286 | 32 |
| JULY | 625.500 | 4.366.538 | 14 | 1.851.150 | 4.813.612 | 38 |
| AUGUST | 845.700 | 4.554.978 | 19 | 1.962.775 | 4.726.174 | 42 |
| SEPTEMBER | 701.100 | 4.375.950 | 16 | 1.985.425 | 4.716.024 | 42 |
| OCTOBER | 753.200 | 4.380.372 | 17 | 1.605.725 | 4.564.086 | 35 |
| NOVEMBER | 607.300 | 4.375.438 | 14 | 1.548.725 | 4.664.910 | 33 |
| DECEMBER | 599.200 | 3.992.183 | 15 | 1.561.900 | 4.636.892 | 34 |
| JANUARY | 557.100 | 3.873.182 | 14 | 1.406.125 | 4.632.894 | 30 |
| FEBRUARY | 584.300 | 4.364.454 | 13 | 1.394.750 | 4.464.198 | 31 |
| PERIOD | 6.574.900 | 42.806.245 | 15 | 16.459.275 | 47.282.354 | 35 |