

Technical Note 37

**PATTERNS IN THE USE OF HEALTH CARE
COMPARATIVE ANALYSES
HOUSEHOLD SURVEY ON THE
DEMAND FOR HEALTH CARE
BOBOYE, ILLÉLA, AND SAY DISTRICTS
IN NIGER
OCTOBER-DECEMBER 1993**

**PILOT TESTS ON COST RECOVERY
IN THE PRIMARY CARE SECTOR**

Submitted to

**Policy and Sector Reform Division
Office of Health and Nutrition
Center for Population, Health and Nutrition
Global Programs, Field Support and Research
Agency for International Development**

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May 1994

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

ABSTRACT

This paper presents the descriptive analysis of the changes in the demand for health care resulting from the introduction of two cost recovery mechanisms which began in two districts in Niger in May 1993 during pilot tests in the non-hospital health sector. This paper presents the results of the analyses comparing the baseline survey carried out in October to December 1992 with the final survey, conducted in October to December 1993. The issues examined in these surveys include: self-care, the utilization of public health facilities, illness-related expenses, and the willingness and ability of the population living in the two test districts to pay for the improvements in the quality of care which took place during the first six months of the pilot tests.

The introduction of fees, coupled with improvements in the quality of health care resulted in cost savings to households in the test districts seeking medical care, as well as in an increase in the utilization of health care in public health facilities. This result is consistent with the population's strong willingness to pay for quality of care improvements in public health facilities. The population surveyed expressed a clear preference for a payment mechanism based on an annual head tax versus one based on user fees, since from their point of view, the indirect (tax) payment method is easier for households to finance.

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EXECUTIVE SUMMARY

Since April 1992, the Ministry of Public Health (MSP) has been conducting pilot tests on cost recovery in the non-hospital sector. The pilot tests have been implemented by *le Bureau Central de Suisse*, a new institutional unit under the Department of Research and Programming. For these tests, the MSP received technical assistance from the Health Financing and Sustainability Project (HFS) and financial support from USAID and the World Bank. The objective of the pilot tests is to provide the MSP with information on the advantages and drawbacks of alternative payment methods, so that a method of payment can be chosen for the formulation of a policy to finance health care in the non-hospital sector.

The evaluation instruments for the pilot tests consist of two components. The first component involves two surveys conducted among households—a baseline survey and a final survey. The second component involves the collection of data from the public health facilities for the purpose of assessing their activities, the amount of medicines used, the receipts from cost recovery, and incremental administrative costs resulting from cost recovery.

The objectives of the household surveys are to provide information on the demand for health care among the households before and after cost recovery was instituted. The areas covered by the household surveys involved the Boboye district, where the indirect payment method has been tested, the Say district, where the direct payment method has been tested, and the Illéla district, which served as the control population.

The baseline survey and the final survey were conducted among the same clusters, with the same collection instruments, and during the same time of the year, so that the demand for health care at the public health facilities in the test districts could be compared before and after the tests began. The baseline survey was conducted from October to December 1992. The final survey was conducted from October to December 1993—six months after payment was instituted at the test health facilities in May 1993. For the baseline and final surveys respectively, 2,800 and 2,700 interviews were conducted on the demand for health care to treat illnesses. Those interviewed stated that they had been ill within the two weeks preceding the interview. In addition, the final survey included 4,000 interviews on payment for health care among individuals age fifteen and older in the Boboye and Say test districts. The objectives of this report are to describe the patterns of health care usage six months after payment for care was instituted, and to compare trends in the demand for health care before and after the start of cost recovery.

Data from the two surveys indicate that taking medicines at home before visiting a public health facility is a very common practice in the three districts. The practice of buying medicines before visiting a health facility increased in the Boboye and Say test districts compared with Illéla, the control district, where there was no change in this practice after the start of the tests. Within the three districts, however, this practice decreased in the villages where a public health facility was located, whereas it increased in areas of the test districts that had no health facility.

Between the baseline and final survey, the percentage of persons who were ill and bought medicines from the pharmaceutical depots decreased by more than half in the three districts. This same trend in the control district, Illéla, indicates that the decrease cannot be attributed solely to the introduction of cost recovery in the test districts.

In the Illéla control district and Say test district, the percentage of persons with an illness who bought their medicines from the informal market increased compared to those who bought them from village health workers. The increased use of the informal market as a source of medicines cut across all the socio-economic groups in the two districts. In the Boboye district, however, the percentage of those who were ill who bought their medicines from the informal market decreased compared to those who bought them from village health workers.

The data from the household surveys support the data from the health facilities. On average, the percentage of ill persons who used public health facilities increased in the Boboye district. In the Say district, use of the facilities decreased slightly. In the Illéla district, use also decreased during the test period.

The decline in the use of public health facilities in the Illéla control district occurred equally among all the demographic groups. In the Say test district, women and children showed similar use of the facilities between the baseline and final surveys. In the Boboye test district, use of public health facilities by women and by children under age five increased 32 percent.

The use of public health facilities was more affected by the time required to reach the health facilities than by the method of payment and fees charged at the health facilities for their services. In fact, the most striking trend among all three districts was the sharp decrease in the use of facilities that were more than an hour away by foot. In other words, the main constraint in using the public health facilities continued to be the physical constraint and the opportunity costs of going to these facilities.

In the Illéla control district, use of public health facilities by those who lived nearby declined. Use of the facilities by those who lived more than an hour away by foot remained at the same very low levels observed before the start of the tests. In the Say test district, the use of public health facilities by ill persons who lived less than an hour by foot decreased slightly. It declined from the high level of 45 percent before payment for care was instituted to 37 percent after payment began. Use of the facilities by persons who lived farther than an hour by foot from a facility increased slightly between the baseline and final surveys.

In the Boboye district, use of public health facilities increased not only among the persons who lived less than an hour away by foot, but also among those who lived in villages less than three hours away by foot. Use of public health facilities by those more than three hours away by foot remained at the same low level observed before the tests began. The 50 FCFA co-payment per illness under the indirect payment method used in the Boboye district did not seem to diminish use of facilities among those who lived in villages near the public health facilities.

The decrease in the use of public health facilities in the Illéla control district between the baseline survey and the final survey cut across all income groups. In the Say test district, persons who were in the highest 25 percent income group decreased their use of the public health facilities between the baseline survey and the final survey. A similar decrease was observed among the lowest 25 percent income group. However, the intermediate income groups increased their use of the facilities between the surveys significantly. In the Boboye district, the use of public health facilities was similar between the baseline and final surveys for the groups in the intermediate income groups. Those in the highest income group increased their use markedly between the two surveys. The lowest 25 percent income group doubled its use of the facilities between the baseline and final surveys.

During the two weeks preceding the interview, the delivery of health care at home and visits to the public health facilities accounted for most illness-related expenses. According to the final survey, those who

sought treatment for an illness spent an average of 250 FCFA in the Illéla control district. In the Say test district, they spent an average of 210 FCFA. And in the Boboye test district, they spent an average of 230 FCFA. In the Illéla control district, the amount spent to use the public health facilities accounted for 64 percent of illness-related expenses. However, in the test districts, about 70 percent of illness-related expenses were for care at home.

The expenses incurred during the two weeks preceding the interview by patients at public health facilities varied among the three districts. In the Illéla control district, the amounts spent by patients were similar between the baseline survey and the final survey. This amount totalled 1,700 FCFA at the time of the baseline survey and 1,800 FCFA at the time of the final survey. In the Say test district, the amount spent by patients of the public health facilities decreased from 1,040 FCFA during the baseline survey to 610 CFA francs during the final survey—a decrease of 41 percent. In the Boboye test district, the amount spent decreased from 1,030 FCFA during the baseline survey to 540 during the final survey—a decrease of 48 percent.

In the Illéla control district, illness-related expenses increased between the baseline and final surveys among patients who lived farther than two hours by foot from the public health facilities. These expenses decreased, however, for patients who lived less than two hours by foot from a health facility. This decrease was mainly due to a reduction in purchases for medicines at the pharmaceutical depots before any visit was made to a health facility. In fact, the amount spent for treatment at the health facilities increased between the two periods.

In the Boboye and Say test districts, the amounts spent by patients of public health facilities decreased between the baseline survey and the final survey, regardless of where they lived. The decrease was due to a decline in the amounts spent for health care at the health facilities. The decrease was even more noticeable in the Boboye test district because of a reduction in the amount spent for medicines before patients visited a health facility.

In the Illéla control district, the amount spent for care at the public health facilities by patients from the poorest households increased by only 38 percent between the baseline and final surveys. The amount paid by patients from the wealthiest households, however, increased by more than 100 percent. In the Say test district, the amount spent by patients from the poorest households increased 82 percent between the baseline and final surveys. At the other end of the scale, the amounts spent by patients from the wealthiest households decreased 44 percent between the baseline and final surveys. This decrease was mainly due to a reduction in the amount spent for treatment at the public health facilities, which decreased an average of 70 percent. In the Boboye test district, there was a decrease in illness-related expenses among patients at the public health facilities, regardless of their income. Among the patients from the lowest income groups, expenses decreased 64 percent between the baseline and final surveys. Among the patients from the highest income groups, expenses decreased 42 percent.

The impact of illness-related expenses on monthly household expenses remained approximately the same between the baseline and final surveys for the households in the Illéla control district. In the Say test district, the impact of illness-related expenses remained the same between the baseline and final surveys among the 40 percent of households with the lowest income. Among the intermediate income groups, the impact of illness-related expenses increased between the two surveys. Finally, illness-related expenses decreased between the two surveys among the 30 percent of households with the highest income. In the Boboye test district, which used the indirect payment method, direct expenses for illnesses decreased between the baseline survey and the final survey except for the 20 percent of households with the lowest income. It can be noted that in the Boboye

test district, the poorer the household, the greater the impact that the tax on all individuals age 18 and older had on the household.

The willingness to pay for care at the public health facilities to ensure that medicines are available was very high. The percentage of individuals age 15 and older who stated that they were willing to pay all the time to ensure that medicines are available at the health facilities was about 90 percent in the two tests districts, Boboye and Say. In the Say test district, about 66 percent of the respondents stated that they were prepared to pay more than the current fee of 200 FCFA per illness. In the Boboye test district, about 62 percent of the respondents stated that they were prepared to pay more than the current co-payment fee of 50 FCFA per illness.

In the two test districts of Boboye and Say, the vast majority of persons age 15 and older stated that they preferred the indirect payment method over the direct payment method. About 84 percent of the respondents in the two test districts stated that they preferred indirect payment, while 6 to 8 percent preferred direct payment. Most of the respondents from the two districts stated that they did not prefer the direct payment method either because they could not afford it, or because they found it difficult to come up with 200 FCFA for each illness. Conversely, they preferred the indirect payment method because they considered it less costly and because they believed they would have no difficulty coming up with 200 FCFA per year.

I..0 1.0 INTRODUCTION

A. 1.1 GENERAL FRAMEWORK

Following their independence, several African countries were confident that they were enjoying sustainable growth, and thus founded their public health system on the principle of free health care. Since the 1980s, however, the limits of this approach have become apparent as the economic crisis which affected several countries in Africa, including Niger, grew worse. The quality of health care in the public sector suffered as a result of adjustments made with or without assistance to confront the budget crisis and because of reductions in the actual allocations for medicines that accompanied these adjustments. Health care services based on the principle of free care became a contradiction—not only were the poorest being restricted from using the health care system, but even households that did have access to the health care services were spending large amounts on medicines to treat their illnesses.

In Niger, a national survey on the use of the health care services, conducted in 1987 by the planning unit of the Ministry of Public Health (MSP), showed that those who were ill were spending large sums to buy and transport medicines for the treatment of their illnesses. This situation was as common in the urban areas as in the rural areas.¹ Findings from this same study indicated that the vast majority of the respondents (92 percent) were willing to contribute financially to get the health care system under control.

As an alternative to the policy of free care, several African countries planned or implemented measures to mobilize the resources within the health sector and to organize their use efficiently, while having the public participate in controlling the costs of primary health care. Community financing under the Bamako Initiative is an example of this move toward financial reform in primary health care.

In terms of mobilizing internal resources, however, several mechanisms, or payment methods, can be used to structure and regulate the population's contribution toward financing health care. These mechanisms offer different advantages and drawbacks in terms of the viability, efficiency, and equity of the financing system and the health care services to be offered.

The Kollo seminar, organized by the MSP in November 1989, was part of a process to identify alternative payment methods for health care in Niger's non-hospital sector. Following the recommendations made at the seminar, the MSP decided to test different payment methods, so that an informed choice could be made in formulating a national policy for financing health care in the non-hospital sector. In this regard, the MSP's Department of Research and Programming (MSP/DEP) developed the methodology for the pilot tests with the financial support of USAID and the technical assistance of Abt Associates Inc. Several departments of the MSP, the Ministry of Finances and Planning, and the Ministry of the Interior, along with several external partners of the MSP, participated in the steering committee instituted by the MSP in 1991. The steering committee has been responsible for preparing and formulating the policies for the pilot tests.

¹Ministry of Public Health and Social Affairs (1987). *Enquête Nationale sur l'Utilisation des Services de Santé [National Survey on the Use of Health Care Services]*. Planning Cell - Tulane Project (September).

Since April 1992, the MSP has been conducting the pilot tests on cost recovery in the non-hospital sector. An institutional unit was established at the central level to monitor and implement the pilot tests. This unit is *le Bureau Central de Suivi*, which is under the administration of the MSP/DEP. The MSP is backed by the support of the Health Financing and Sustainability Project (HFS), a project financed at the central level by the USAID and which has been providing considerable institutional resources in conducting the tests.

The political backdrop against which the pilot tests were instituted was one of complete transition—transition from an era of elitism to an era of democracy. There can be no doubt that the pilot tests benefited from this transitional phase, which at least was characterized by political innovation. Economically, however, the pilot tests were instituted during a time of budgetary contraction, which had its effects on the health care system. While the pilot tests were being implemented, there were frequent interruptions in the supplies of essential medicines, both at the local pharmacies and at the public health facilities, and numerous other factors that demoralized the care providers and eroded the quality of services. Even under these difficult conditions, however, several medical districts improved their services, especially their services for preventive care. Thus, the state of health care services in the Boboye and Say districts developed under the pilot tests was an anomaly compared to the state of the country's overall health care system.

The pilot tests on cost recovery in the non-hospital sector are structured around the health facilities. The pilot tests consist 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. This objective has been pursued by training health care providers at the health centers in the application of standardized diagnostic and treatment protocols and by setting up supplies of generic essential medicines at the health facilities.

The goal of the second component is to improve management capabilities at 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, to ensure that there is some external control in the management of the health facilities.

The goal of the third component is to mobilize resources at the local level by asking the public to contribute for health care. 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 of 200 CFA francs (100 CFA francs per child) for each illness. 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 first two components have been implemented in the two test districts of Boboye and Say. As for the third component, the indirect payment method is being tested in the Boboye district; the direct payment method is being tested in the Say district. In a third district, the Illéla district, no intervention has been conducted, as in the rest of the country. This district is serving as the control group. In terms of financing health care, this district represents the option of continuing the current policy of free health care.

The instruments for evaluating the pilot tests consist of two components. The first component involves 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 second component involves collecting data on: the health facilities' activities, the amount of medicines used and receipts taken in at the health facilities, and the incremental administrative costs resulting from cost recovery.

The baseline survey was conducted from October to December 1992. Personnel from the health facilities received training on the diagnostic and treatment protocols and management training between December 1992 and April 1993. In May 1993, the initial supplies of generic essential medicines were stocked; the collection of payment in the health facilities of Boboye and Say began immediately after the medicines were stocked. The final survey was conducted during the same months of the calendar year as the baseline survey October - December 1993, which is six months after payment for health care began.

The data from the baseline survey were summarized in an initial applied research report on the patterns in the usage of health care in the Boboye, Illéla, and Say districts. Detailed econometric analyses are being conducted on the data from the baseline and final surveys. An interim report was written in December 1993 on the financial and technical performance of the health facilities, based on data from the pilot tests.

B.

1.2 OBJECTIVE AND ORGANIZATION OF THIS REPORT

The objectives of this report are: 1) to show the patterns in the usage of health care six months after payment for care began, and 2) to compare the demand for care before and after the start of cost recovery. In this respect, this report is one of several analyses in progress for evaluating the pilot tests.

The remainder of this report is divided into eight sections. Section 2 summarizes the methodology of the household surveys. Section 3 describes the characteristics of the samples in the final survey.

The demand for health care is a process consisting of a series of stages and involving several decisions. The series starts by perceiving that one is ill, deciding to take a certain action to treat the illness, then choosing to administer medicines on one's own or to consult someone who will prescribe the medicines to take. The person prescribing the medicines may be a traditional healer or modern health care provider. Along the way, these stages require a commitment of resources to obtain the services and products that together will treat the illness.

The patterns in the usage of health care and the direction these patterns have taken since the pilot tests were instituted are described in Sections 4-7 according to this same series of stages. The perception that one is ill, the frequency of specific health complaints, and the decision to seek care will be discussed in Section 4. Section 5 will discuss care administered at home (self-medication). Section 6 describes the use of the public health facilities. Illness-related expenses are described in Section 7. Given the changes that cost recovery has caused in the delivery of health care, each section will include a comparison of the behavior of those experiencing an illness based on the data from the baseline and final surveys. Only a descriptive analysis of the demand for curative treatment is presented here. This analysis will provide indications of the effects that the introduction of cost recovery has had on the demand for health care. The implications of the results from

the pilot tests on the formulation of a policy, however, will be determined by considering the variety of analyses that are being conducted. Lastly, Section 8 will describe the population's attitudes and preferences regarding payment for care and the payment methods being tested.

TABLE 1-1
METHODOLOGY OF THE PILOT TESTS ON COST RECOVERY

COMPONENTS	LEVEL TARGETED BY THE INTERVENTION	DISTRICT			
		BOBOYE - INDIRECT	SAY - DIRECT	ILLELA - CONTROL	
I. INTERVENTIONS					
I.1	AWARENESS DEVELOPMENT AND ESTABLISHMENT OF LOCAL HEALTH COMMITTEES	THE PUBLIC	SAME	SAME	N/A
I.2	TRAINING IN DIAGNOSIS AND TREATMENT PROTOCOLS	THE HEALTH FACILITIES	SAME	SAME	N/A
I.3	TRAINING ON FINANCIAL MANAGEMENT AND ON MANAGING THE MEDICINES	THE HEALTH FACILITIES	SAME	SAME	N/A
I.4	INITIAL SUPPLY OF MEDICINES	THE HEALTH FACILITIES	SAME	SAME	N/A
I.5	PAYMENT FOR CARE	THE PUBLIC THE HEALTH FACILITIES	TAX: 200 FCFA F/YR ADULT: 50 FCFA F/ILLNESS CHILD: 25 FCFA F/ILLNESS	ADULT: 200 FCFA F/ILLNESS CHILD: 100 FCFA F/ILLNESS	N/A
II. EVALUATION					
II.1	BASELINE SURVEY	THE PUBLIC	SAME	SAME	SAME
II.2	FINAL SURVEY	THE PUBLIC	SAME	SAME	SAME
II.3	DATA FROM THE HEALTH FACILITIES	THE HEALTH FACILITIES	SAME	SAME	SAME

II.0 2.0 METHODOLOGY OF THE SURVEYS

The effects of cost recovery on the demand for care cannot be evaluated solely by the data from health facilities. Important policy issues, such as the equity and accessibility of the services and the willingness of the various sectors of the public to participate in the new health care financing system, can only be considered from information collected among the individual households. In this respect, the data from the household surveys supplement the data from the health facilities by providing information on the way the public has reacted to the new health care delivery system instituted by cost recovery.

The methodology of the household surveys was presented in the first applied research report, which was based on the data from the baseline survey.² Therefore, in the first subsection, the objectives and methods of the surveys will be summarized. The second subsection will discuss the organization of the final survey. The third subsection will summarize data on the completion rate for the interviews of the final survey.

A. 2.1 SUMMARY OF THE OBJECTIVES AND METHODS

The *long-term objective* of the household surveys is to provide information on the demand for health care which, when combined with the data collected at the health facilities, can help improve the supply of medicines and the financial viability of Niger's health care services.

The *immediate objectives* of the household surveys are:

1. to provide information on the use of health facilities by persons who were ill.
2. to provide information on the amount of funds spent on health care, including medicines, consultations and examinations, and travel costs.
3. to collect information to compare the behavior of households and individuals in seeking health care under the two payment methods tested by the pilot tests.

The areas in which the household surveys were administered involved the two districts where the payment methods for cost recovery were tested—the Boboye district in the Dosso province and the Say district in the Tillabéri province—and a control group—the Illéla district in the Tahoua province.

²Diop, François P. (1993). *Patterns in the Usage of Health Care: Applied Research Report No. 1. Pilot Tests on Cost Recovery in the Non-Clinical Sector*. Ministry of Public Health: Health Financing and Sustainability Project. Niamey: May (Draft).

The immediate objective (#3), the aim of which is to compare the effect that the different methods of cost recovery have had on the demand for health care, imposes a certain restriction on the survey methodology to be used for the household surveys. It was necessary to survey three independent samples from the three districts in order to compare the effect of different interventions on health seeking behavior. The size of the sample required for each district was estimated at 3,983 persons, or 612 households in each district. The overall size of the sample for the household surveys would therefore have to be 1,836 households (612 x three districts).

The list of catchment zones (*zones des denombrement*) and villages in the General Population Census of 1988 (RGP 88) served as the sampling base for the household surveys. The 1988 census had counted 544,000 inhabitants in the survey areas: 205,000 in the Boboye district, 176,000 in the Illéla district, and 167,000 in the Say district. The latest updated list of the health facilities in Niger dating from November 1988, was combined with the 1988 census list of catchment zones, so that the survey population for each district in the study could be stratified according to the availability of a health facility in the catchment zone. Thus, in each district, two strata were defined: (1) a stratum with a health facility and (2) a stratum without a health facility. Finally, each catchment zone was divided into catchment subzones of about 72 households.

The households to be surveyed were selected according to a survey plan stratified by clusters. Selection involved a three-step process. In the first step, the catchment zones were selected with a probability of selection proportional to the number of catchment subzones in the catchment zone. For each district, 5 catchment zones were drawn from the stratum with health facilities and 29 catchment zones were drawn for each district from the stratum without health facilities. In the second step, 1 catchment subzone in each catchment zone was drawn at random.

The catchment subzones for the baseline and final surveys were identical. During each survey, however, the households in the specific catchment subzones were selected independently in each survey. In the third step, then, 18 households in each catchment subzone, which is one out of every four households, were chosen at random for each survey.

To study the behavior regarding curative and preventive care and the economic factors involved, five questionnaires were designed for the household surveys: (1) a household questionnaire, (2) a questionnaire on curative care, (3) a questionnaire on preventive health care, (4) a questionnaire on income, and (5) a questionnaire on payment for health care. *Table 2.1* outlines the different questionnaires that were administered for the baseline and final surveys.

The household questionnaire had two main objectives: 1) to identify the persons who were ill, children under age five, and pregnant women. These groups comprised the samples for the analysis on the demand for medical care; and 2) to collect information on the socio-economic characteristics of the individuals and on household expenses. This questionnaire was administered to each household selected in the sample.

The objectives of the questionnaire on Curative Care were to obtain: 1) a description of the illness, 2) a description of the care chosen and the amounts expended, both in money and in kind, to treat the illness. The curative care questionnaire was administered to all visitors and residents present at the home who had been ill, had been injured, or were in an accident during the two weeks preceding the survey-taker's visit.

**TABLE 2.1
QUESTIONNAIRES ADMINISTERED DURING THE HOUSEHOLDS SURVEYS**

QUESTIONNAIRE	BASELINE SURVEY	FINAL SURVEY
Household	same	same
Creative Care	same	
Preventive Health Care	same	same
Income	unique	
Payment for Health Care	unique	

The object of the questionnaire on preventive health care was to collect information on the use of perinatal services and on the use of preventive care for preschool children. It was administered to each woman who was a visitor or a resident present at the home who was 15 to 49 years old and who had been pregnant during the twelve months prior to the household interview or who had a child under age five presently living with her.

The questionnaire on income allowed the sources of monetary income to be determined and measured for individuals who had been gainfully employed during the year prior to the interview. It was administered only during the baseline survey, so that information on the source of monetary income could be obtained for the three districts.

The objectives of the questionnaire on payment for health care were: 1) to collect information on the willingness of adults to pay for the health care improvements introduced by cost recovery, and 2) to document the adults' preferences regarding the two payment methods tested. This questionnaire was administered only during the final survey and only in the Boboye and Say districts. It is included in this report as Annex 1.

In conclusion, the baseline and final surveys had the same objectives and used the same methods. Moreover, they were conducted in the same clusters. The households selected in each cluster, however, were not necessarily the same for both surveys. The household questionnaires, questionnaire on curative care, and the questionnaires on preventive health care were administered in both surveys. The only data collection instruments that differed between surveys were the questionnaire on income, which was administered only during the baseline survey, and the questionnaire on payment for health care, which was administered only during the final survey and only in the Boboye and Say test districts. Because of the similarity of the objectives and methods of the two surveys, both surveys were organized in the same manner.

B. 2.2 ORGANIZATION OF THE FINAL SURVEY

The final survey was organized around two activities: 1) data collection, and 2) data processing. This subsection briefly describes how the survey was organized for each activity. We will conclude the subsection by summarizing the timetable for these activities.

1. 2.2.1 DATA COLLECTION

Data collection for the final survey was performed in two phases: 1) a phase involving the selection and training of field personnel, and 2) a phase for the data collection itself.

The selection and training of field personnel was accomplished at the National School of Public Health in Niamey between September 30 and October 18, 1993. Thirty-five (35) candidates had been preselected from a pool of 295 candidates. Most of those preselected were data collectors and team leaders who had collected the data for the baseline survey. Training for the data collectors lasted two weeks. At the end of the training, 18 data collectors and six team leaders were selected.

Following the approach used for the baseline survey, six teams of data collectors were organized. Each team consisted of a team leader, three data collectors, and a driver. Two teams were assigned to each district. Each team was responsible for combing 17 clusters according to a schedule established before the data collection had started. The two members from the Department of Statistics and National Accounting who had supervised the teams for the baseline survey performed this same function during the final survey.

Data collection began in the field on October 27, 1993. By December 3, 1993, all 102 clusters had been surveyed. The final survey encountered fewer logistical difficulties than the baseline survey. As a result, there was closer technical supervision of the data collection for the final survey than for the baseline survey.

2. 2.2.2 DATA PROCESSING

To ensure that the data would be available on a timely basis, the data processing activities were interspersed with the data collection itself. The data collection personnel were selected on November 17, 1993: six candidates were chosen, of whom four had participated in data collection for the baseline survey.

The National System of Health Information (SNIS) provided substantial support for the data collection. The SNIS furnished the BCS with six computers for data entry. Data collection began on November 22, 1993 and was completed on January 12, 1994.

The data processing activities were arranged so that the data from the baseline survey could be re-coded in a standardized format. They were re-coded so that the files from the baseline and final surveys would have the same structure. In this way, data from the surveys could be interchanged, and files of the same type could be combined. A series of programs was developed to re-code each file: the file on the household, the file on household expenses, the file on treatment for illnesses, the file on preventive health care, and the file on payment for health care. By running the data from the baseline and final surveys through these programs, the files were standardized. These files served as the basis for the present report.

In conclusion, the final survey was conducted during the same period of the year as the baseline survey (see the Timetable of Interventions and Evaluation Activities, *Table 2.2*). However, because of delayed rainfall during the 1993 rainy season, the way the data collection activities in the field coincided with harvesting activities varied somewhat between the two surveys. The baseline survey was conducted after millet was harvested. Nearly half of the clusters in the final survey, however, were surveyed while millet was being harvested. During this time of the season, the family is needed in the fields rather extensively.

The implication that the timing of the surveys relative to the harvest season has on the methodology of the surveys concerns the different opportunity costs associated with the household members' time and the impact that these opportunity costs had on the use of the public health services during the baseline and final surveys. The sample from the Illéla control district will enable the outcome and extent of this disparity between the two surveys to be evaluated.

TABLE 2.2
CALENDAR OF ACTIVITIES FOR THE BASELINE AND FINAL SURVEYS

ACTIVITIES	BASELINE SURVEY		FINAL SURVEY	
	START	END	START	END
Finalizing preparations	August 8, 1992	September 30, 1992	August 2, 1993	September 24, 1993
Selecting and training survey workers	October 1, 1992	October 15, 1992	September 30, 1993	October 18, 1993
Data collection in the field	October 26, 1992	December 10, 1992	October 27, 1993	December 3, 1993
Data acquisition	November 16, 1992	February 13, 1993	November 17, 1993	January 12, 1994
Data processing ³	December 4, 1992	In progress	December 6, 1993	In progress

³The files from the two surveys were cleaned up and standardized. The data from both the baseline and the final surveys are being processed to produce the specific analyses.

C. 2.3 INFORMATION ON THE SAMPLES

This subsection provides an overview of the completion rate for the interviews in the final survey. *Table 2.3a* shows the completion rate for the final survey among the survey units, which were the clusters and households.

All 102 catchment subzones which comprised the sample of clusters for the household surveys were covered. For the final survey, eighteen households were selected in each catchment subzone. Out of the 1,836 households for which interviews were planned, 1,834 were surveyed. This represents a completion rate of 99.9 percent. All of the households planned for the Boboye and Say districts were interviewed; in the Illéla district, however, two households out of the 612 that had been planned were not surveyed.

The total number of individuals surveyed was 4,848 in the Boboye sample, 3,980 in the Illéla sample, and 4,221 in the Say sample. Among this sample, only the individuals who were present—residents present at the home and visitors—were eligible for the individual survey questionnaires. The total number of individuals who were present amounted to 4,631 in Boboye, 3,737 in Illéla, and 4,008 in Say.

In conclusion, 13,049 individuals were surveyed during the final survey. Among these individuals, 12,376 were visitors or were residents present at the home; the residents present and the visitors were administered eligibility tests for the questionnaire on curative care, the questionnaire on preventive health care, and the questionnaire on payment for health care.

Table 2.3b shows the completion rate for the individual interviews in relation to the number of people eligible for the specific questionnaires—the questionnaire on curative care, the questionnaire on preventive health care, and the questionnaire on payment for Health care. The completion rate for the interviews was very high. For the three districts combined, 99.4 percent of those who were eligible for the questionnaire on curative care completed an interview. For the questionnaire on preventive health care, this rate reached 99.8 percent. And for the questionnaire on payment for health care, the Boboye and Say districts had a 97.8 percent completion rate. This high completion rate was demonstrated in each district and on each of the specific questionnaires.

In conclusion, among the 2,726 individuals who stated that they had been ill during the two weeks preceding the interview, 2,710 individuals completed the interview on curative care. Among the 1,619 women ages 15 to 49 who had been pregnant during the previous twelve months or who had a child under age five presently living with them, 1,615 completed the interview on preventive health care. And among the 4,050 individuals age 15 or older who were present in the Boboye and Say districts, 3,960 completed the interview on payment for health care.

Table 2.3c summarizes the size of the samples in the baseline and final surveys. It can be seen that the number of people surveyed on curative health care was larger in the Boboye district during the baseline survey than during the final survey. By contrast, in the Say district, the sample on curative care in the final survey was larger than the corresponding sample in the baseline survey. These results are not surprising, however—the number of people complaining of illnesses can vary from year to year during the same time of the year because of epidemiological factors and the mobility of the population. In the three districts, the mobility of the population is related to inclement weather conditions and nomadic herding patterns.

The completion rate of the collective and individual interviews during the final survey was very high. Although the surveys were conducted in the same clusters and a similar number of households were interviewed, the final survey included fewer visitors and residents present at the home compared to the baseline survey. On the whole, however, the size of the samples was very similar between the baseline and final surveys—such variation is common for quasi-experimental samples.

TABLE 2.3a
 INFORMATION ON THE SAMPLE
 NUMBER OF CLUSTERS, NUMBER OF HOUSEHOLDS,
 AND NUMBER OF INDIVIDUALS SURVEYED PER DISTRICT

	DISTRICT			
	SAY	BOBOYE	ILLELA	TOTAL
Number of Clusters	34	34	34	102
Number of Households Planned	612	612	612	1,836
Number of Households Surveyed	612	612	610	1,834
Percentage (%) of Households Surveyed	100.0	100.0	99.7	99.9
Number of Individuals Surveyed	4,221	4,848	3,980	13,049
Number of Residents Present	3,950	4,558	3,688	12,196
Number of Residents Not Present	213	217	243	673
Number of Visitors	58	73	49	180
Residents Present and Visitors	4,008	4,631	3,737	12,376

TABLE 2.3b
 INFORMATION ON THE SAMPLE
 NUMBER OF INDIVIDUALS ELIGIBLE FOR INDIVIDUAL INTERVIEWS
 AND NUMBER OF INDIVIDUAL INTERVIEWS COMPLETED PER DISTRICT

TYPE OF QUESTIONNAIRE	DISTRICT			
	SAY	BOBOYE	ILLELA	TOTAL
CURATIVE CARE				
Number of Individuals Eligible	853	945	928	2,726
Number of Individuals Surveyed	847	936	927	2,710
Percentage (%) Surveyed	99.3	99.0	99.9	99.4
PREVENTIVE HEALTH CARE				
Number of Individuals Eligible	508	601	512	1,619
Number of Individuals Surveyed	508	595	512	1,615
Percentage (%) Surveyed	100.0	99.0	100.0	99.8
PAYMENT FOR HEALTH CARE				
Number of Individuals Eligible	1,859	2,191	-	4,050
Number of Individuals Surveyed	1,852	2,108	-	3,960
Percentage (%) Surveyed	99.6	96.2	-	97.8

TABLE 2.3c
 SAMPLING FOR THE HOUSEHOLD SURVEYS
 NUMBER OF HOUSEHOLDS AND INDIVIDUALS SURVEYED
 IN THE BASELINE AND FINAL SURVEYS

SURVEY/TYPE OF QUESTIONNAIRE	DISTRICT			
	SAY	BOBOYE	ILLELA	TOTAL
BASELINE SURVEY				
Number of Households Surveyed	605	611	609	1,825
CURATIVE CARE				
Number of Individuals Surveyed	644	1,309	886	2,833
PREVENTIVE HEALTH CARE				
Number of Individuals Surveyed	545	682	544	1,770
INCOME				
Number of Individuals Surveyed	1,787	1,734	1,290	4,811
FINAL SURVEY				
Number of Households Surveyed	612	612	610	1,834
CURATIVE CARE				
Number of Individuals Surveyed	847	936	927	2,710
PREVENTIVE HEALTH CARE				
Number of Individuals Surveyed	508	595	512	1,615
PAYMENT FOR HEALTH CARE				
Number of Individuals Surveyed	1,852	2,108	-	3,960

III..0 3.0 CHARACTERISTICS OF THE SAMPLE

The effects that payment for care will have on the demand for care and on the different social groups largely depends on the characteristics of the individuals and the households, and those of the communities to which they belong. Certain characteristics are especially relevant for developing a public health policy. As far as the communities are concerned, the distance from the public health facilities, around which the pilot tests were structured, may play a decisive role. Certain collective characteristics of a household which measure its ability to purchase goods and services in the health care market, such as its income, are of particular interest, as they determine the income group to which a household and its members belong and in this way allow the poorest households to be identified. Certain specific socio-demographic characteristics have an established epidemiological significance, namely age and sex. Other individual socio-demographic characteristics, such as educational background, determine access to information and education on health issues. Under certain conditions, particular socio-demographic characteristics can also determine an individual's access to the household's resources and, consequently, to the health care market's goods and services.

The purpose of the household and individual characteristics examined in this section is to depict the characteristics of the samples in the final survey and their comparability with the samples from the baseline survey in the three districts. In the first subsection, we shall discuss the characteristics of the households. In the second subsection, we shall consider the characteristics of the individuals comprising the samples.

A. 3.1 CHARACTERISTICS OF THE HOUSEHOLDS

This subsection will first consider the socio-demographic characteristics of the heads of the households and then the socio-economic characteristics of the households.

The head of the household is the household member who most affects the income generated and the way it is distributed within the household. *Table 3.1a* shows the socio-demographic characteristics of the heads of the households. To begin with, 88 percent of the household heads in the three districts were age 30 or older. The number who were age 60 or older was relatively high. This demographic characteristic is rather typical of the rural conditions found in the three districts, and is more pronounced as a result of emigration, which was significant in all three districts. The three districts had a very similar age distribution for the heads of the households.

Secondly, the vast majority of households were headed by men. The Illéla district had a relatively higher number of households headed by women compared to the Boboye and Say districts. The same trend was observed during the baseline survey. A higher rate of long-term emigration explains this difference between the control district and the test districts.

TABLE 3.1a
DISTRIBUTION OF THE HOUSEHOLDS BY SOCIO-DEMOGRAPHIC CHARACTERISTICS
OF THE HEAD OF THE HOUSEHOLD AND BY DISTRICT
(AMONG THE HOUSEHOLDS SURVEYED)

	DISTRICT		
	SAY	BOBOYE	ILLELA
Head of the Household's Age			
< 15	-	0.5%	-
15-29	11.3%	6.0%	11.0%
30-44	36.3%	36.9%	36.9%
45-59	33.6%	36.4%	37.2%
60 +	18.8%	20.1%	14.9%
TOTAL	100.0%	100.0%	100.0%
Head of the Household's Sex			
Male	96.7%	96.7%	93.4%
Female	3.3%	3.3%	6.6%
TOTAL	100.0%	100.0%	100.0%
Head of the Household's Ethnic Background			
DJERMA	20.7%	75.0%	0.5%
HAUSA	7.4%	5.1%	78.4%
FULANI	35.4%	16.5%	3.3%
OTHER	36.5%	3.4%	17.9%
TOTAL	100.0%	100.0%	100.0%
Number of Households	612	612	610

Thirdly, the ethnic background of the heads of the households confirms the variation in ethnic composition among the three districts. The Boboye and Illéla districts have a more homogenous ethnic profile than the Say district. The ethnic profile of the Boboye district is mainly Djerma, while in Illéla, it is mainly Hausa. In the Say district, where the Fulani are the largest group, other groups such as the Djerma and the Gourmantché are relatively well represented among the population.

The variation in ethnic groups is significant in terms of their participation in the health care system. Aside from the languages they speak, the different ethnic groups vary in the way they earn their livelihood, their geographic mobility, and the way the family unit is organized. For example, the Fulani are a pastoral people, which also means they are more mobile than the Hausa and Djerma, who are mainly farmers. Unlike the Fulani and Djerma, certain Hausa subgroups restrict the interaction women have outside the home through a number of customs; such customs are common in the Illéla district.

In conclusion, the households were not very different with regard to the demographic characteristics of the heads of the households. In terms of ethnic composition, however, they were not similar. Within the same district, the same characteristics were observed between the baseline and final surveys.

Table 3.1b summarizes the socio-economic characteristics of the households. As the data from the baseline survey had indicated, households in the Boboye district were comparatively larger than those in the Illéla and Say districts. The size of the households in the Illéla and Say districts, however, were relatively similar.

Exhibit 3.1a describes monthly per capita monetary expenses for the households in the three districts (for a definition of the indicators in the graph, see the note to *Table 3.1b*). The amounts spent per person each month were fairly similar across the three districts. They were noticeably higher, however, in the Say district compared to the other two districts. Monthly per capita monetary expenses per household were similar between the Boboye and Illéla districts.

On average, Say's households spent about 2,200 FCFA per person during the month preceding the interview; monthly per capita monetary expenses per household averaged 1,800 FCFA in Boboye and 1,700 FCFA in Illéla. In the three districts, the 25 percent of households that spent the least money per capita spent less than 700 FCFA per person. At the other end of the scale, the 25 percent of households that spent the most money per capita spent more than 2,500 FCFA per person in the Say district, and more than 1,900 FCFA per person in the Boboye and Illéla districts.

In conclusion, household monetary expenses were fairly similar among the three districts. However, it appears that within each district, the liquid assets available varied widely among the rural households.

Exhibit 3.1b compares monthly per capita monetary expenses per household in the three districts between the baseline and final surveys. As can be seen, within each district, the estimates of monthly per capita monetary expenses were fairly similar between the baseline and final surveys. This observation is important in terms of the methodology of the surveys for several reasons. First, it indicates that per capita monetary expenses were measured consistently between the two surveys: the results in terms of expenditures per person were similar between the households in the baseline and final surveys. Secondly, per capita monetary expenses serve as a stable economic indicator for the households in the pilot test.

In the remainder of this report, monthly per capita monetary expenses per household will be used as an indicator of a household's steady income. This approach is appropriate for the pilot tests, especially considering that in a rural setting a household's monetary expenses indicate the household's ability to purchase goods and services in a market where payment is becoming more and more cash-based. This indicator will be used to classify the households and household members by level of income.

B.

3.2 CHARACTERISTICS OF THE INDIVIDUALS

In this subsection, the characteristics of the individual members of the sample will be summarized in terms of their age, ethnic group, and attendance at a modern school. In addition, the distance of the public health facilities in relation to the income levels of the individuals will also be considered.

Table 3.2a summarizes the characteristics of the population in the three districts in terms of age and ethnic background. As can be expected, the age distribution in the three districts was typical of a population with a high birthrate—the population of the districts was generally young. In fact, about 50 percent of the population in the three districts were less than 15 years old. The three districts are fairly comparable in this respect.

The high rate of emigration, despite varied patterns in emigration among the population in the three districts, is confirmed by the low number of men in the intermediate age groups. This trend is more common in the Boboye and Illéla districts. In fact, the ratio of males to females was less than .80:1.00 among the 15-44 age group in the three districts. However, the ratio was as low as .66 to 1.00 for the 15-29 age group in the Boboye district and .68:1.00 in the 30-44 age group in the Illéla district.

The individual characteristics of the sample also indicate that the population had a heterogeneous ethnic composition, as was mentioned in the previous subsection. It can be noted that the number of Fulani on the final survey decreased in the Say district in relation to the group "Others," which includes the Gourmantché. The first clusters in the final survey were surveyed while millet was still being harvested. Thus, the Fulani, who were in transit grazing their livestock, were beginning the return leg of their journey, while the young Gourmantché had not yet set off. This variation between the baseline and final survey in terms of ethnic composition was observed only in Say.

The connection between public funding and distance from a health facility can be seen from the decrease in the percentage of individuals who have attended a modern school in relation to the time by foot to the nearest public health facility. In fact, schools and public health facilities were located in the same populated areas—in the administrative seat for the district and in village centers. This trend was much more common in the Boboye and Say districts than in the Illéla district.

Exhibit 3.2a shows a comparison between the baseline and final surveys in terms of the number of women who had attended a modern school. As expected, the extent of school attendance was very similar between the two surveys.

TABLE 3.1b
SOCIO-ECONOMIC CHARACTERISTICS OF THE HOUSEHOLDS:
BY DISTRICT (AMONG THE HOUSEHOLDS SURVEYED)

	DISTRICT		
	SAY	BOBOYE	ILLELA
Size of the Household			
< 5	28.1%	17.0%	28.5%
5-7	35.9%	38.2%	42.1%
8-11	25.7%	28.6%	21.8%
12 +	10.3%	16.2%	7.5%
TOTAL	100.0%	100.0%	100.0%
Mean	6.8	7.9	6.5
Monthly Per Capita Expenses (CFA F)⁴			
1st Quartile (Q25)	687	593	588
Median	1,333	1,021	1,068
3rd Quartile (Q75)	2,577	1,880	1,944
Mean	2,225	1,785	1,667
Number of Households	612	612	610

⁴ 1st Quartile, Median, and 3rd Quartile indicate expenses among the households.

EXHIBIT 3.1a
SUMMARY OF MONTHLY PER CAPITA EXPENSES PER HOUSEHOLD

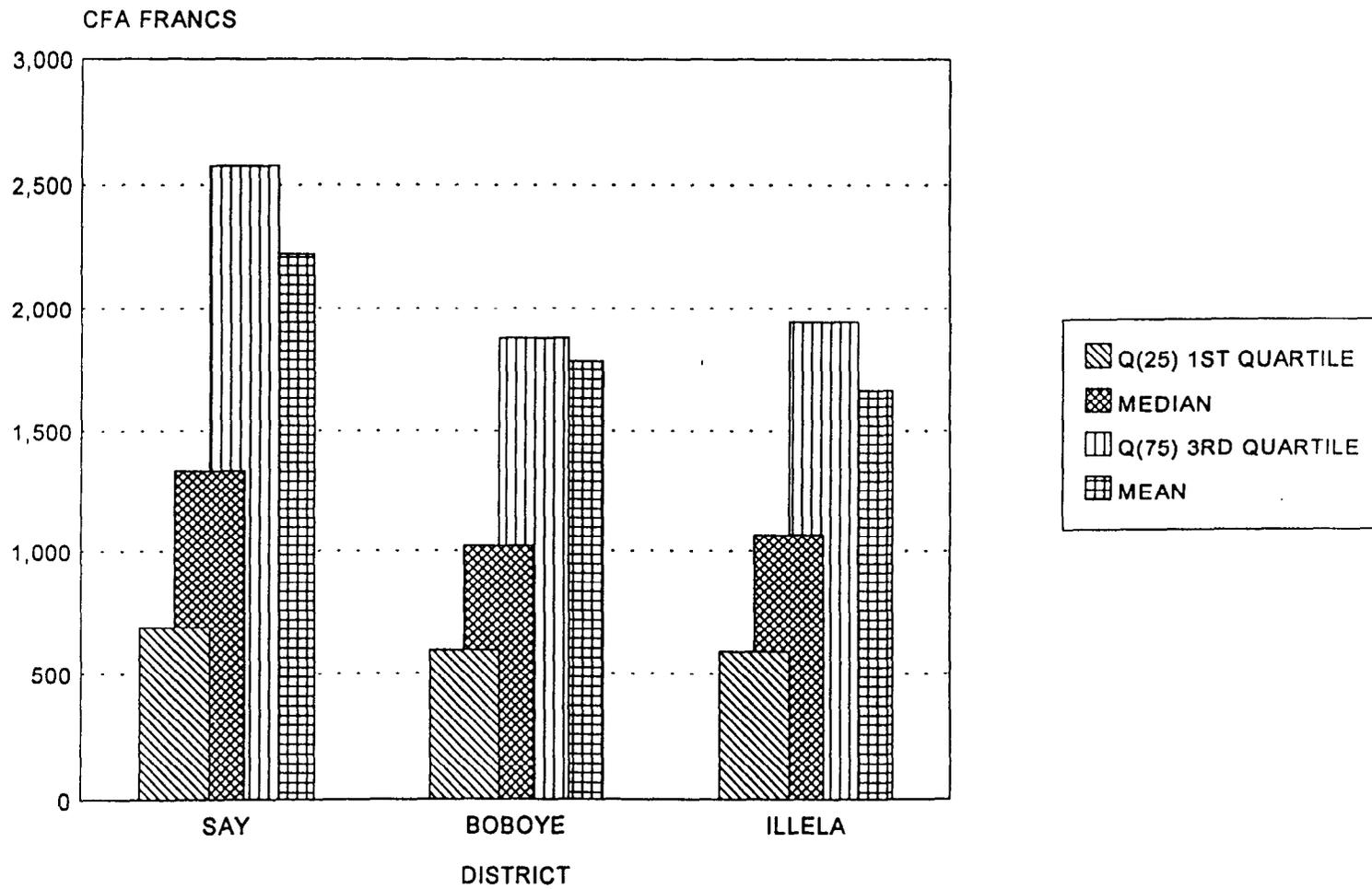


EXHIBIT 3.1b
MONTHLY PER CAPITA MONETARY EXPENSES PER HOUSEHOLD:
BASELINE AND FINAL SURVEYS (MEANS)

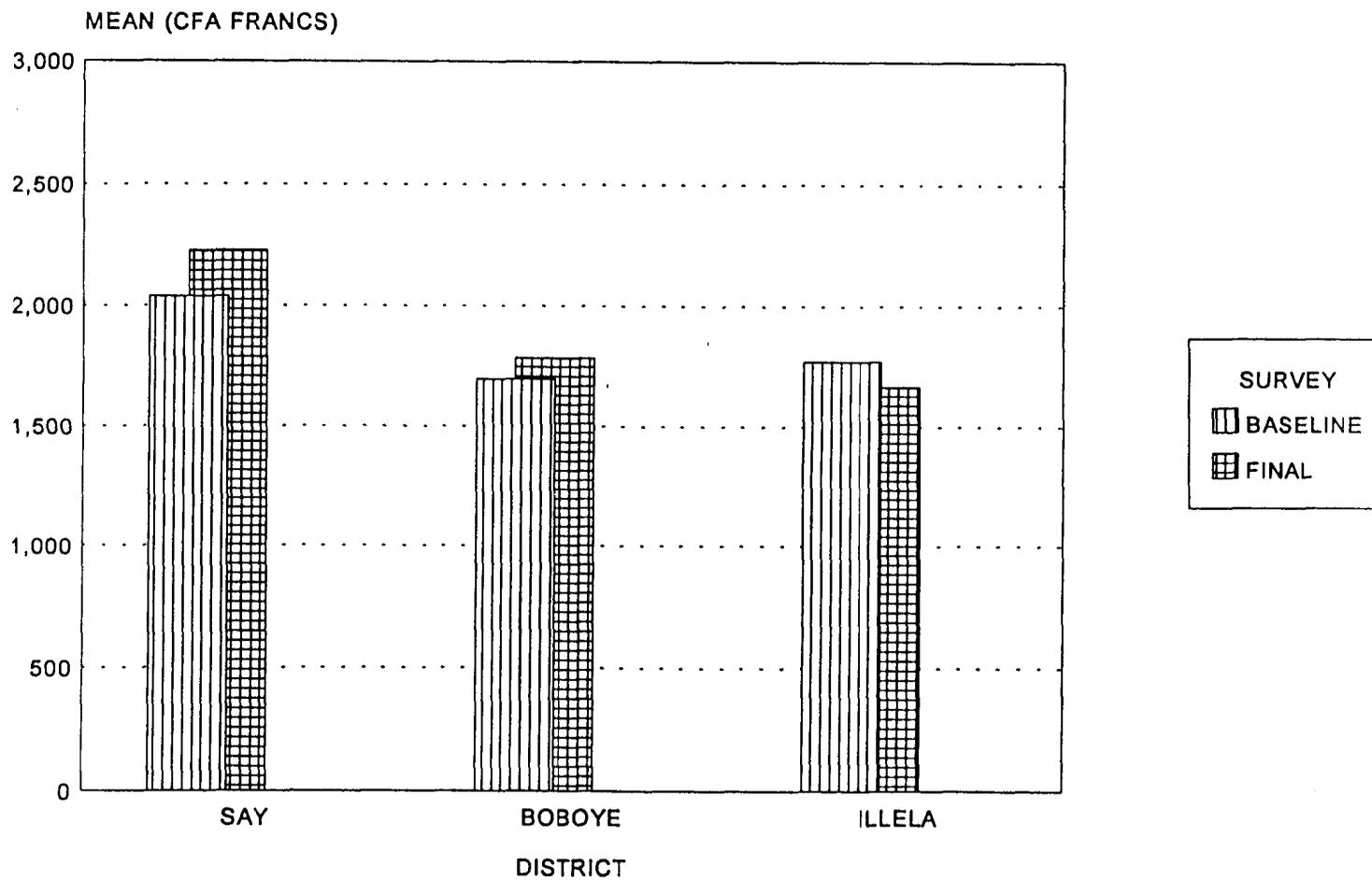


TABLE 3.2a
DISTRIBUTION OF THE SAMPLE ACCORDING TO AGE, ETHNIC GROUP, AND SEX BY DISTRICT
(RESIDENTS PRESENT AND VISITORS)

	DISTRICT					
	SAY		BOBOYE		ILLELA	
	Male	Female	Male	Female	Male	Female
Age in Years						
0-4	19.1%	17.4%	18.4%	16.8%	19.0%	17.3%
5-9	19.6%	18.3%	21.7%	18.7%	18.8%	17.7%
10-14	16.9%	15.6%	14.8%	14.6%	13.8%	12.2%
15-19	8.1%	8.4%	9.0%	9.3%	10.5%	10.0%
20-24	4.8%	6.5%	4.0%	5.9%	4.5%	6.7%
25-29	4.6%	6.6%	3.7%	7.5%	4.7%	8.8%
30-34	4.3%	4.6%	4.2%	6.4%	4.9%	6.0%
35-39	3.5%	5.3%	4.2%	4.9%	3.6%	7.0%
40-44	3.6%	4.4%	3.7%	3.4%	3.9%	3.7%
45-49	3.9%	3.4%	3.6%	3.3%	4.1%	3.3%
50-54	2.6%	3.3%	3.0%	3.2%	3.8%	2.6%
55 +	9.0%	6.1%	9.6%	6.1%	8.5%	4.7%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Ethnic Group						
DJERMA	21.6%	20.6%	75.0%	78.0%	0.7%	0.5%
HAUSA	6.0%	7.2%	4.5%	4.4%	82.6%	82.0%
FULANI	38.3%	36.1%	16.2%	14.1%	2.2%	3.2%
OTHERS	34.1%	36.1%	4.4%	3.5%	14.5%	14.4%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
No. of Individuals	1,984	2,024	2,194	2,439	1,792	1,945
Ratio of Males to Females According to Age in Years						
0-14	1.06		.99		1.01	
15-29	.80		.66		.72	
30-44	.78		.75		.68	
44 +	1.19		1.15		1.42	
TOTAL	.98		.90		.92	

Cost of Materials and Supplies: This category includes drugs and medical supplies provided by Embaba Hospital, stationery, cleaning supplies, and other consumables. Total monthly costs of drugs and supplies are estimated at LE 161,351, not including prescribed drugs that patients purchase outside of the hospital. A large portion of the drugs and supplies are consumed by the intermediate (ancillary) services departments, particularly the operation theaters.

In algebraic form, total expense of department i is estimated through the following equation:

$$TC_i = B_i PB + OE_i + \sum_{j=1}^n E_{ij} PE_{ij} + \sum_{j=1}^n L_{ij} W_{ij} + \sum_{j=1}^n C_{ij} PC_{ij} + U_i PU$$

Where

TC _i	=	Total expenses at department i
B _i	=	Total building space occupied by department i
PB	=	Depreciated cost of building space
OE _i	=	Share of overhead equipment depreciated cost allocated to department i
E _{ij}	=	Number of equipment in category j at department i
PE _{ij}	=	Depreciated cost of a unit of equipment j at department i
L _{ij}	=	Number of personnel in category j at department i
W _{ij}	=	Salary of personnel in category j at department i
C _{ij}	=	Units of consumable j used by department i
PC _{ij}	=	Unit price of consumable j
U _i	=	Units of utility consumed by department i
PU	=	Unit price of utility

4.1.1 Step-Down Allocation of Cost to Inpatient, Outpatient, and Emergency Medical Procedures and Services

The five major categories of costs at Embaba Hospital comprise the total cost of operating the hospital. These costs are assigned to overhead, intermediate service, and final service departments through direct distribution or step-down allocation. The unit of cost produced in this study will be determined through a series of step-down procedures to allocate costs to inpatient, outpatient, and emergency medical procedures and services.

Costs of the overhead departments are first allocated to intermediate service and final service departments. Total costs of the intermediate service department after allocation of overhead cost are then allocated to final service departments. Finally, costs at the final service departments are allocated to inpatient, outpatient, and emergency medical procedures and services.

Exhibit 3.2b summarizes the length of time required by foot for the respondents to reach the public health facilities in the three districts. A difference between the three districts was observed in this regard. Although a relatively large number of individuals in the Illéla district lived less than an hour by foot from the public health facilities (29 percent), nearly 62 percent lived more than two hours away by foot. Eighteen (18) percent of the individuals in the Say district lived less than an hour by foot from the public health facilities; however, 53 percent lived more than two hours away by foot. Finally, 23 percent of the individuals in the Boboye district lived less than an hour by foot from the health facilities, whereas 48 percent lived more than two hours away by foot. It is apparent that the health facilities in the Boboye district were more physically accessible than those in the Say and Illéla districts.

Comparing the physical accessibility of the health facilities to specific levels of income, we find that in the Boboye and Say districts, those in the highest income groups were also closer to public health facilities than their counterparts in the lowest income groups (see *Table 3.2c*). This difference by income group physical accessibility to public health facilities was not observed in the Illéla district.

In conclusion, the age distribution in the three districts was typical of a population with a high birthrate—more than 50 percent of the population were under 15 years old. The youthfulness of the population was accentuated by a low number of males in the intermediate age groups. Most of the population in the intermediate age groups had never attended a modern school.

The households in the three districts were headed by men in the upper age groups, despite evidence of large-scale emigration by males. This was common to all three districts despite the differences in ethnic composition. The population in the Boboye district was predominantly Djerma, while the population in Illéla was mainly Hausa. The population in the Say district, however, was a patchwork of ethnic groups; the Fulani, who are a pastoral people, were the largest group. The size of the household did not seem linked to the household's ethnic origins—in fact, the distribution in the size of the households was similar among the districts.

Table 3.2b summarizes school attendance in the three districts. The percentage of individuals age six and older who had never attended a modern school was very low in the three districts. Furthermore, the disparity in school attendance between men and women was relatively low in the Say and Boboye districts. It was relatively pronounced, however, in the Illéla district.

The percentage of individuals who attended a modern school was higher among those in the upper income groups. The variation in school attendance by income group was more extensive in the Boboye and Say districts than in the Illéla district.

Per capita household monetary expenses in the Say district were slightly higher than per capita expenses in the Boboye and Illéla districts. Finally, the public health facilities in the Boboye district were easier to reach than those in the Illéla and Say districts.

TABLE 3.2b
 PERCENTAGE OF INDIVIDUALS WHO HAVE ATTENDED A MODERN SCHOOL,
 BY SEVERAL SOCIO-ECONOMIC CHARACTERISTICS
 (RESIDENTS PRESENT AND VISITORS -- AGE 6 AND OLDER)

	SAY		BOBOYE		ILLELA	
	Attended a Modern School (%)	Number of Individuals	Attended a Modern School (%)	Number of Individuals	Attended a Modern School (%)	Number of Individuals
Age in Years						
6-9	22.1	620	15.6	745	16.5	544
10-14	32.1	651	21.9	680	19.2	484
15-29	23.5	783	14.2	917	13.7	849
30-44	9.3	517	4.8	624	5.3	546
45 +	1.9	567	1.1	663	.2	501
Sex						
Male	21.2	1,525	15.0	1,692	17.1	1,389
Female	16.4	1,613	9.2	1,937	6.0	1,535
Income Group						
Low	11.1	900	9.2	1,003	8.3	843
Medium Low	15.3	818	7.6	927	12.4	824
Medium High	18.8	740	9.6	867	13.5	653
High	33.1	680	22.5	832	11.4	604
Time by Foot to the Nearest Public Health Facility						
< 1 hr.	35.9	585	26.6	828	15.4	838
[1, 2)	22.8	887	8.2	1,054	3.7	272
[2, 3)	17.3	632	6.0	830	8.6	594
3 hrs. or more	6.6	1,034	8.3	917	11.4	1,220
TOTAL	18.8	3,138	11.9	3,629	11.3	2,924

Exhibit 3.2b Percentage of Residents Present at the Home and Visitors Who Lived Less than One, Two, and Three Hours by Foot from a Public Health Facility—by District

EXHIBIT 3.2b
PERCENTAGE OF RESIDENTS PRESENT AT THE HOME AND VISITORS WHO LIVED LESS THAN ONE, TWO, AND
THREE HOURS BY FOOT FROM A PUBLIC HEALTH FACILITY--BY DISTRICT

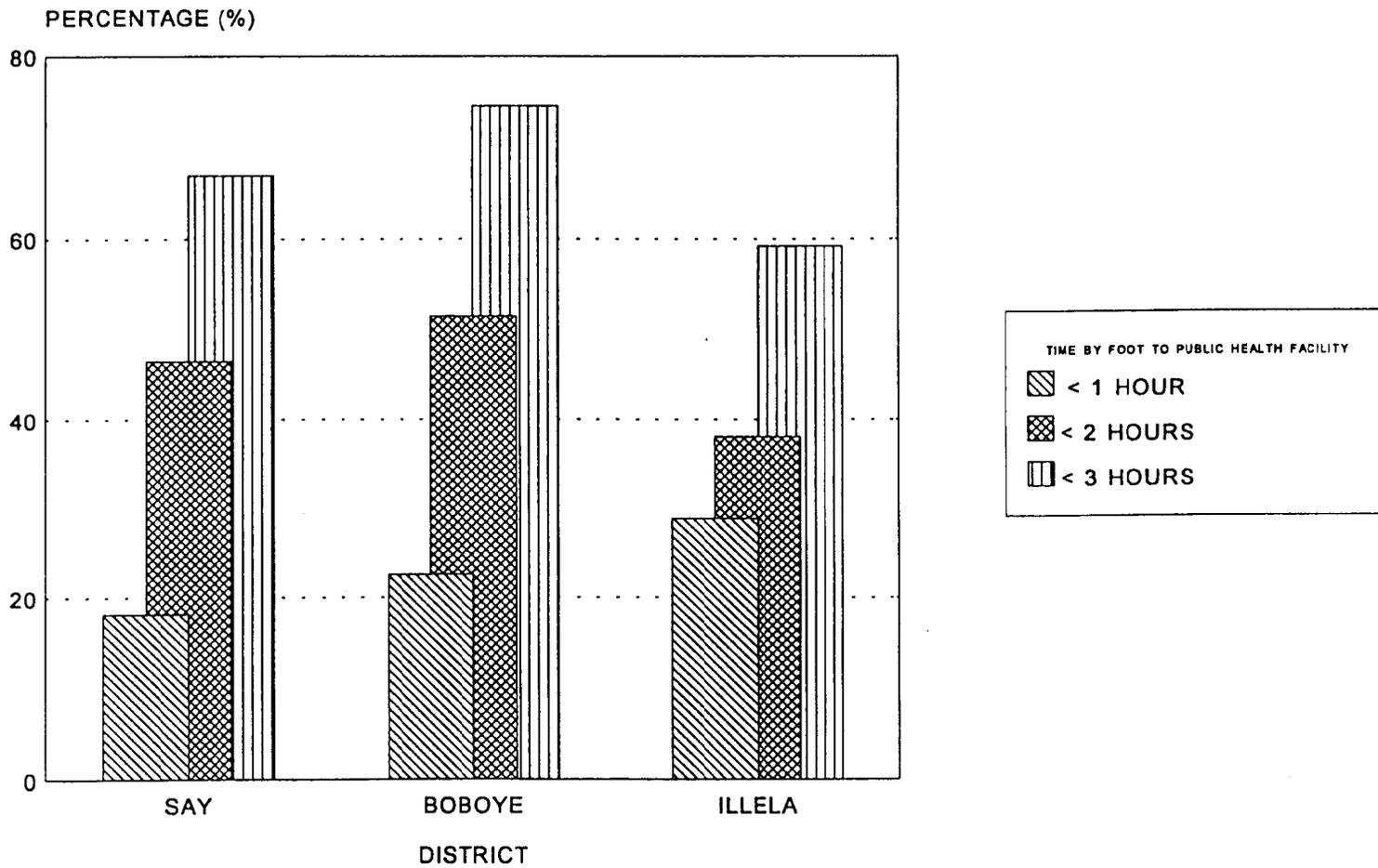


TABLE 3.2C
 CUMULATIVE PROPORTION (%) OF INDIVIDUALS BY THE TIME BY FOOT
 TO THE NEAREST PUBLIC HEALTH FACILITY: BY INCOME GROUP AND DISTRICT
 (RESIDENTS PRESENT AND VISITORS)

District/Income Group	Percentage (%) of Individuals Living Less than 1 hour, 2 hours, and 3 hours by Foot from a Public Health Facility			
	1 Hour	2 Hours	3 Hours	Number of Individuals
SAY				
Low	8.76	34.95	57.42	1,153
Medium Low	14.52	48.48	71.84	1,019
Medium High	23.03	43.78	61.83	964
High	29.36	62.61	79.82	872
Total	18.14	46.53	67.02	4,008
BOBOYE				
Low	10.53	46.30	72.54	1,311
Medium Low	17.52	44.06	69.84	1,187
Medium High	27.36	55.54	77.77	1,093
High	38.46	62.50	79.42	1,040
Total	22.57	51.54	74.63	4,631
ILLELA				
Low	23.11	40.34	56.16	1,056
Medium Low	34.73	41.36	65.17	1,071
Medium High	30.73	36.41	58.98	846
High	26.44	32.20	55.24	764
Total	28.85	38.08	59.19	3,737

IV..0 4.0 CURATIVE CARE: THE DECISION TO SEEK TREATMENT

A statement that one has been ill is generally used to indicate the perception of an illness. For the household surveys, two questions were used to identify those individuals present at the home who had been ill during the two weeks preceding the interview. The individuals who stated that they had been ill were asked a series of questions to identify the symptoms associated with their illness. The report that the individual had been ill and the description of the symptoms are discussed in this same order in the first two sub-sections. These items will serve as a basis for comparing the needs, such as they were perceived by those complaining of an illness, among the districts and within each district. The last sub-section provides a quantitative summary of the various steps taken to treat the illness.

A. 4.1 PERCEPTION OF AN ILLNESS

Table 4.1 shows the number of people in the three districts of Boboye, Illéla, and Say who stated that they were ill. As had been indicated in the baseline survey, the number of people who stated that they were ill in the three districts was not as high as in other countries outside Africa. It was, however, higher than in other African countries.⁵

In the Illéla control district, of the residents and their visitors who were present at the home, 25 percent stated that they had been ill during the two weeks preceding the interview. The rate of self-reported illness was not as high in the Boboye and Say test districts, where the rate was 20 percent for Boboye and 21 percent for Say. These differences are not significant, however.

Within the same district, the number of self-reported illnesses was higher for the lower and upper age groups than for the intermediate age groups, which reflects the variations in the morbidity rate for the various age groups. There were no significant differences, however, between males and females. The same held true for ethnic group, the two survey strata, and income groups.

In conclusion, the rate of self-reported illnesses was comparable among the three districts, where the rate ranged from 20 to 25 percent. The data from the final survey indicate that the 14 percent rate reported during the baseline survey in the Say district was abnormally low. Like the data from the baseline survey, the data from the final survey indicate that self-reported illness did not vary by socio-demographic or economic factors, other than by age. The variation by age in the rate of self-reported illness is consistent with the demographic patterns for morbidity.

⁵In countries such as El Salvador, the Dominican Republic, Colombia, and Peru, the number of people who stated that they had been ill during the two weeks preceding the interview varied between 35 percent and 47 percent. In Zaire, though, levels as low as 11 percent have been observed. BITRAN, R.A. and KEITH, McInnes (1992). *Health Care Demand in Latin America: Lessons Drawn from the Dominican Republic and El Salvador*. An EDI Seminar Paper: Abt Associates Inc., Cambridge, Massachusetts; December.

TABLE 4.1
 THE PERCEPTION OF AN ILLNESS
 PERCENTAGE OF INDIVIDUALS WHO REPORTED HAVING BEEN ILL
 DURING THE TWO WEEKS PRECEDING THE INTERVIEW,
 BY SEVERAL SOCIAL, DEMOGRAPHIC, AND ECONOMIC CHARACTERISTICS
 (AMONG THE RESIDENTS AND THEIR VISITORS WHO WERE PRESENT AT THE HOME)

	DISTRICT					
	SAY		BOBOYE		ILLELA	
	Reported Being Ill (%)	Number of Individuals	Reported Being Ill (%)	Number of Individuals	Reported Being Ill (%)	Number of Individuals
Age in Years						
<5	33.65	731	27.64	814	36.63	677
5-14	16.67	1,410	15.62	1,613	16.41	1,164
15-29	15.33	783	16.58	917	19.67	849
30-44	19.15	517	21.79	624	28.02	546
45-59	27.14	350	27.59	424	32.94	337
60 +	26.73	217	26.36	239	35.37	164
Sex						
Male	21.67	1,984	19.84	2,193	24.61	1,792
Female	20.90	2,024	20.92	2,438	25.04	1,945
Ethnic Group						
DJERMA	21.78	845	20.56	3,546	13.64	22
HAUSA	20.38	265	19.42	206	25.27	3,075
FULANI	21.77	1,488	21.06	698	24.51	102
OTHERS	20.64	1,410	16.02	181	22.86	538
Strata						
With Pub. Health Fac.	19.63	591	21.73	695	22.30	592
Without Pub. Health Fac.	21.57	3,417	20.17	3,936	25.31	3,145
Income Group						
Low	19.08	1,153	15.56	1,311	23.01	1,056
Medium Low	21.00	1,019	19.21	1,187	25.21	1,071
Medium High	22.41	964	24.34	1,093	21.87	846
High	23.28	872	23.75	1,040	30.10	764
TOTAL	21.28	4,008	20.41	4,631	24.83	3,737

B. 4.2 SYMPTOMS

Self-reported fever, coughing, or watery stools during the illness were used to estimate the variations in needs between the three districts and among the different socio-economic groups. *Table 4.2a* shows the rate in the three districts of self-reported fever and coughing, as well as the rate of watery stools.

The percentage of those with an illness who stated that they had had a fever during the two weeks preceding the interview averaged between 75 and 85 percent in the three districts. The rate was comparatively low in Say, where it was 75 percent, as opposed to Boboye, with a rate of 84 percent, and Illéla, with a rate of 85 percent. During the baseline survey, the rate of those with an illness who reported having had a fever was 74 percent for Say, 86 percent for Boboye, and 90 percent for Illéla. The rate of self-reported fever within each district was similar in the baseline and final surveys. Furthermore, the difference between the rate for the Say district and for the two other districts occurred in both surveys.

Within each district, there were no significant differences between the socio-demographic groups and the socio-economic groups (see *Tables 4.2a* and *4.2b*). The differences observed between the Say district, on the one hand, and the Boboye and Illéla districts, on the other, were also observed among the socio-demographic and socio-economic groups defined in *Tables 4.2a* and *4.2b*. An exception to this overall trend was the distribution in relation to age in the Say district, where self-reported fever was more prevalent among the under-fifteen age groups than among the older age groups.

The percentage of persons with an illness who stated that they had had a cough during the two weeks preceding the interview was similar among the three districts. The rate was between 11 and 15 percent (see *Tables 4.2a* and *4.2b*). This rate was similar to that found in the baseline survey, except for the Boboye district, where the rate had been nearly 24 percent. Self-reported coughing did not vary in relation to socio-demographic or socio-economic group within any given district.

The percentage of persons with an illness who stated that they had had watery stools during the two weeks preceding the interview varied between 15 percent in Say and 22 percent in Boboye. In all three districts, the rate increased with the individual's age (see *Table 4.2a*). The percentage of children under five who complained of an illness and reported that they had watery stools during the two weeks preceding the interview was 31 percent in the Say district, compared to 45 percent in Illéla and 48 percent in Boboye. The same geographic and demographic patterns were found in both the baseline and final surveys.

In conclusion, the percentage of persons with an illness who reported having had a fever was relatively high in the three districts. The rate of watery stools reported by the respondents, however, was lower in the Say district compared to the Boboye and Illéla districts. It can be noted that the rate of these symptoms did not vary among the socio-demographic and economic groups within the same district, with the exception of the rate for watery stools, which was higher among children under age five. The data from the final survey confirm the conclusion derived from the data in the baseline survey that there was no significant variation in the needs of the different socio-demographic and economic groups within the three districts. In other words, the determining factor in terms of needs is more geographic and demographic in nature than social or economic.

TABLE 4.2a
SYMPTOMS
PERCENTAGE OF INDIVIDUALS WHO REPORTED HAVING HAD A GIVEN SYMPTOM DURING THE TWO
WEEKS PRECEDING THE INTERVIEW, BY SEVERAL SOCIO-DEMOGRAPHIC CHARACTERISTICS
AND BY DISTRICT
(AMONG THE PERSONS REPORTING AN ILLNESS)

	DISTRICT											
	SAY				BOBOYE				ILLELA			
	Fever	Coughing	Watery Stools	No. of Respondents	Fever	Coughing	Watery Stools	No. of Respondents	Fever	Coughing	Watery Stools	No. of Respondents
Age in Years												
0-4	83.6	19.3	31.1	244	90.6	17.5	48.0	223	89.9	13.3	44.8	248
5-14	80.6	12.5	11.6	232	84.5	17.5	12.7	251	83.8	9.4	6.8	191
15-44	66.7	11.4	9.6	219	80.6	9.9	11.3	283	80.6	9.1	12.8	320
45 +	66.4	13.8	5.9	152	82.7	17.3	19.0	179	85.1	13.7	14.3	168
Sex												
Male	73.2	15.6	16.1	429	84.1	16.6	22.8	429	85.2	13.9	20.9	440
Female	77.5	13.2	15.3	418	84.6	14.0	21.1	507	84.0	8.6	19.9	487
Ethnic Group												
DJERMA	80.7	21.0	18.2	181	84.0	15.4	23.3	721	66.7	0.0	33.3	3
HAUSA	72.2	14.8	9.3	54	72.5	12.5	25.0	40	84.8	10.2	20.7	776
FULANI	78.3	12.7	13.6	323	88.4	13.7	15.8	146	92.0	4.0	12.0	25
OTHERS	69.2	12.1	17.6	289	89.7	20.7	13.8	29	82.1	18.7	19.5	123
Strata												
With Pub. Health Fac.	80.2	19.0	13.8	116	82.6	13.4	17.4	149	81.1	11.4	22.7	132
Without Pub. Health Fac.	74.6	13.7	16.0	731	84.8	15.5	22.7	787	85.2	11.1	20.0	795
TOTAL	75.3	14.4	15.7	847	84.4	15.2	21.9	936	84.6	11.1	20.4	927

TABLE 4.2b
 SYMPTOMS
 PERCENTAGE OF INDIVIDUALS WHO REPORTED HAVING HAD A GIVEN SYMPTOM DURING THE TWO
 WEEKS PRECEDING THE INTERVIEW, BY INCOME GROUP
 AND DISTRICT
 (AMONG THE PERSONS REPORTING AN ILLNESS)

Income Group	DISTRICT											
	SAY				BOBOYE				ILLELA			
	Fever	Coughing	Watery Stools	No. of Respondents	Fever	Coughing	Watery Stools	No. of Respondents	Fever	Coughing	Watery Stools	No. of Respondents
Low	72.6	9.6	12.8	219	81.8	16.3	29.1	203	82.3	8.2	17.3	243
Medium Low	72.0	15.9	18.2	214	84.5	14.6	19.5	226	88.1	11.5	21.9	270
Medium High	79.4	15.0	14.5	214	84.8	12.5	20.1	264	82.2	12.4	19.5	185
High	77.5	17.5	17.5	200	86.0	17.7	20.2	243	84.7	12.7	22.7	229
TOTAL	75.3	14.4	15.7	847	84.4	15.2	21.9	936	84.6	11.1	20.4	927

C. 4.3 THE DECISION TO SEEK CARE

The decision to seek care is indicated by the determination, or lack of a determination, to take some action to treat the illness. This action may be to receive care from a traditional or modern drug provider at home, to use medicines available in the home, to purchase medicines before visiting a drug provider outside the home, and/or to seek out care from a care prescriber outside the home to treat the illness. Theoretically, no action is taken to treat the illness unless the expected benefits of this action exceed the perceived costs of this action. The expected benefits are a function of how serious the illness is perceived to be and how effective the action under consideration is perceived to be.

Table 4.3a shows the percentage of persons with an illness who resolved to seek some form of care to treat their illness during the two weeks preceding the interview. About 64 percent of those with an illness in the Illéla control district resolved to take some form of action to treat their illness. This percentage was lower than the percentage for the Say district, which was 80 percent, or for the Boboye district, which was 90 percent. The data from the baseline survey had indicated that the percentage of those with an illness who resolved to seek some form of treatment was 69 percent for Illéla, 72 percent for Say, and 84 percent for Boboye.

The percentage of those with an illness who resolved to take some form of action to treat it did not vary significantly among the demographic groups within each district. However, there was variation by ethnic group in the Boboye and Say districts; the Fulani group were less likely to seek treatment for their illness. This finding is consistent with the findings from the data in the baseline survey.

Table 4.3b summarizes differences in the determination to seek some form of care in relation to the time by foot required to reach the nearest public health facility and according to income group. In the Boboye district, these differences seem to have had no effect on the population's inclination to seek some form of treatment. In the Illéla and Say districts, persons with an illness who lived less than an hour by foot from the health facilities were more inclined to seek some form of treatment than their counterparts who lived more than an hour away by foot. In the same districts, the higher the sick person's income group, the more likely that person was to seek some form of treatment.

In *Table 4.3c*, the seriousness of the illness is first indicated by the sick person's perception of the illness, which is subjective. Then it is indicated by the length of time that the sick person was confined to bed, which is a more objective indicator. Whichever indicator is used, for all three districts the tendency to seek some form of care increased as the seriousness of the illnesses increased. (What a surprise!)

In conclusion, the tendency to seek some form of treatment for an illness was rather high in all three districts. It was significantly higher in the test districts than in the Illéla control district. The Fulani set themselves apart by their comparatively low tendency to seek some form of treatment. In the Illéla and Say districts, those who lived close to a public health facility had a higher tendency to seek health care than their counterparts who lived in villages far away from the health facilities. In addition, persons who were ill in the three districts were more likely to seek health care if they belonged to high income groups than if they belonged to low income groups. As expected, the tendency to seek care increased with the seriousness of the illness. (What a surprise!)

TABLE 4.3a
THE DECISION TO SEEK CARE
PERCENTAGE OF INDIVIDUALS WHO REPORTED USING SOME FORM OF TREATMENT DURING THE TWO WEEKS
PRECEDING THE INTERVIEW, BY SEVERAL SOCIO-DEMOGRAPHIC CHARACTERISTICS AND BY DISTRICT
(AMONG THE PERSONS REPORTING AN ILLNESS)

	DISTRICT					
	SAY		BOBOYE		ILLELA	
	SOUGHT SOME FORM OF CARE	No. of Respondents	SOUGHT SOME FORM OF CARE	No. of Respondents	SOUGHT SOME FORM OF CARE	No. of Respondents
Age in Years						
0-4	79.1	244	87.0	223	63.7	248
5-14	84.1	232	90.4	251	68.1	191
15-44	76.7	219	90.5	283	65.0	320
45 +	77.6	152	94.4	179	60.1	168
Sex						
Male	77.4	429	91.6	429	68.9	440
Female	81.8	418	89.3	507	60.4	487
Ethnic Group						
DJERMA	83.4	181	92.1	721	66.7	3
HAUSA	94.4	54	95.0	40	64.6	776
FULANI	74.3	323	79.5	146	60.0	25
OTHERS	80.3	289	96.6	29	64.2	123
Strata						
With Pub. Health Fac.	89.7	116	91.9	149	74.2	132
Without Pub. Health Fac.	78.0	731	90.1	787	62.8	795
TOTAL	79.6	847	90.4	936	64.4	927

TABLE 4.3b
 THE DECISION TO SEEK CARE
 PERCENTAGE OF INDIVIDUALS WHO REPORTED USING SOME FORM OF TREATMENT DURING THE TWO WEEKS
 PRECEDING THE INTERVIEW, BY SEVERAL ECONOMIC CHARACTERISTICS OF THE HOUSEHOLD AND BY DISTRICT
 (AMONG THE PERSONS REPORTING AN ILLNESS)

	DISTRICT					
	SAY		BOBOYE		ILLELA	
	SOUGHT SOME FORM OF CARE	No. of Respondents	SOUGHT SOME FORM OF CARE	No. of Respondents	SOUGHT SOME FORM OF CARE	No. of Respondents
Time by Foot to the Nearest Public Health Facility						
< 1 hr.	89.0	146	91.4	221	75.7	226
[1, 2)	79.0	252	88.3	282	49.4	83
[2, 3)	81.2	149	91.8	194	64.4	222
3 hrs. or more	74.7	300	90.8	239	61.1	396
Income Group						
Low	68.0	219	88.7	203	54.3	243
Medium Low	79.9	214	88.5	226	63.7	270
Medium High	82.2	214	90.2	264	70.8	185
High	89.0	200	93.8	243	70.7	229
TOTAL	79.6	847	90.4	936	64.4	927

TABLE 4.3c
 THE DECISION TO SEEK CARE
 PERCENTAGE OF INDIVIDUALS WHO REPORTED USING SOME FORM OF TREATMENT DURING THE TWO WEEKS
 PRECEDING THE INTERVIEW, BY THE SERIOUSNESS OF THE ILLNESS AND BY DISTRICT
 (AMONG THE PERSONS REPORTING AN ILLNESS)

	DISTRICT					
	SAY		BOBOYE		ILLELA	
	SOUGHT SOME FORM OF CARE	No. of Respondents	SOUGHT SOME FORM OF CARE	No. of Respondents	SOUGHT SOME FORM OF CARE	No. of Respondents
Perception of the Seriousness of the Illness						
Not Serious	71.2	271	84.4	212	59.4	389
Serious	85.4	481	90.6	575	73.0	400
Very Serious	82.5	57	100.0	80	83.3	24
Do Not Know	60.5	38	95.7	69	47.4	114
Length of Time Confined to Bed (in Days)						
None	75.3	296	87.6	306	56.2	425
1-4 days	80.5	328	89.6	355	68.4	288
5 or more days	83.9	223	94.5	275	75.2	214
TOTAL	79.6	847	90.4	936	64.4	927

V.0 5.0 THE PREVALENCE OF CARE AT HOME

Data from the baseline survey showed that most of the population in the three districts treated their illnesses at home prior to the introduction of cost recovery. Care at home mainly involved using medicines available in the house and using medicines purchased for the illness before making any visit to a drug provider outside the home. The data from the baseline and final surveys indicate that the treatment of an illness by a drug provider in the sick person's home was very rare in the three districts. Consequently, this section will not consider such treatment. The use of medicines at home will be discussed first. Then, the extent to which medicines were purchased before visiting a health facility will be considered. Finally, we shall identify the sources from which medicines were purchased for treatment at home.

A. 5.1 THE USE OF MEDICINES AT HOME

Using medicines at home to treat an illness before visiting a drug provider was rather common in all three districts. In the Illéla control district, 54 percent of those with an illness used medicines at home. In the test districts, the figure was 64 percent for Say and 81 percent for Boboye (see *Table 5.1a*).

Within a given district, there was relatively little variation in the use of medicines at home in relation to age, sex, or ethnic origin. It should be noted, however, that the Fulani showed less tendency to use medicines at home than the other ethnic groups.

In the Illéla and Say districts, the use of medicines at home was not related to distance from the public health facilities (see *Exhibit 5.1a*). In the Boboye district, however, the tendency to use medicines at home was higher among villages more than an hour away by foot from a public health facility compared to villages closer to the health facilities.

Within the three districts, the tendency to use medicines at home increased as the level of income increased (see *Exhibit 5.1b*). This difference by income group was more pronounced, however, in the Illéla and Say districts than in the Boboye district.

Exhibit 5.1c depicts the tendency to use medicines at home before and after the pilot tests began. A comparison of the data between the baseline and final surveys suggests that the tendency to use medicines at home increased in the Boboye and Say test districts compared to the Illéla district.

In the baseline survey, the use of medicines at home was more common among villages that were closest to the public health facilities and among the highest income groups. This continued to be the norm in the Illéla control district. In the pilot test districts, differences in the use of medicines at home before visiting a health facility according to the respondent's distance from a public health facility and his income group decreased noticeably in the final survey.

EXHIBIT 5.1a
PERCENTAGE OF PERSONS WITH AN ILLNESS WHO USED MEDICINES AT HOME
BEFORE VISITING A HEALTH FACILITY: TIME BY FOOT TO THE PUBLIC HEALTH FACILITY

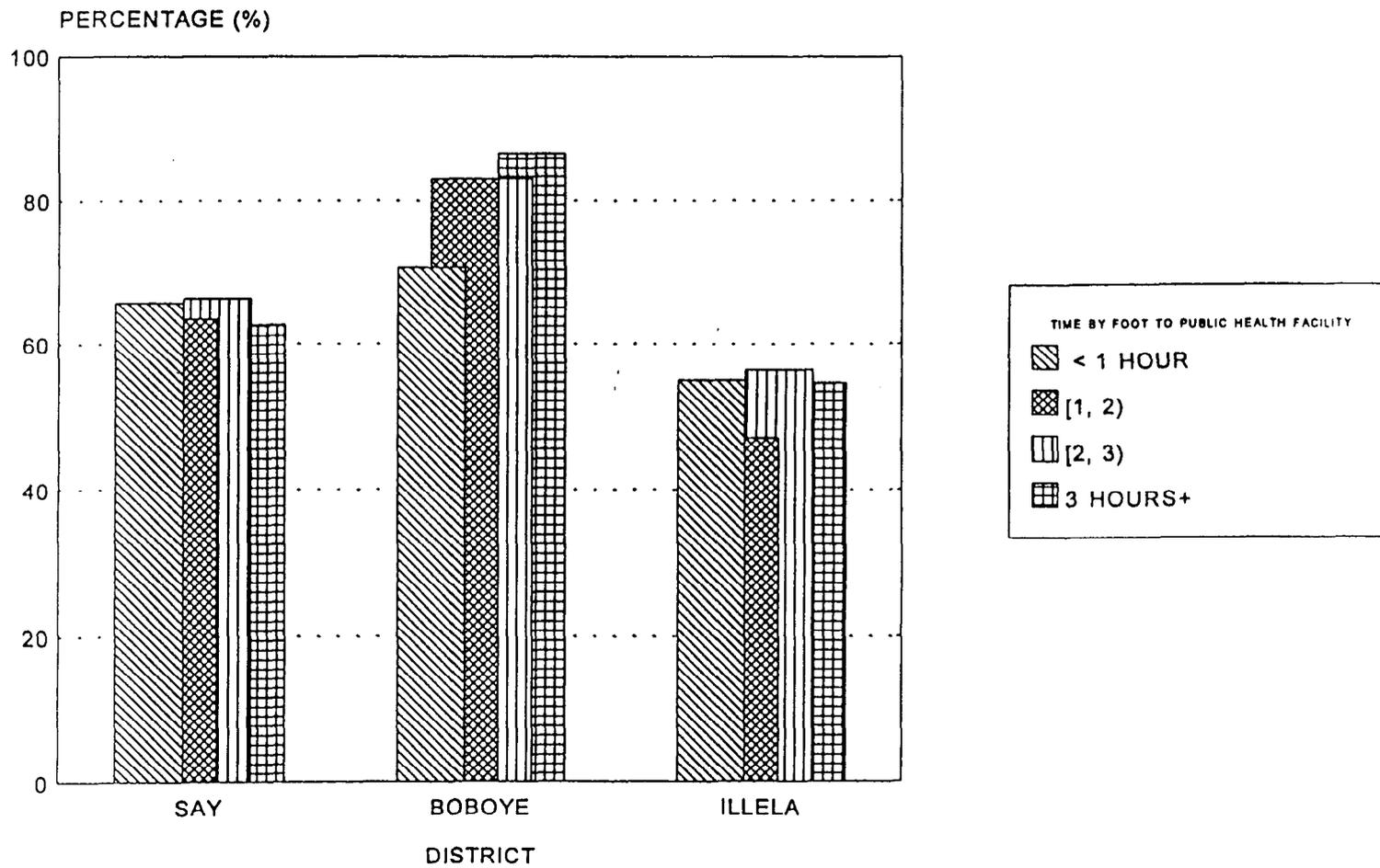


EXHIBIT 5.1b
PERCENTAGE OF PERSONS WITH AN ILLNESS WHO USED MEDICINES AT HOME
BEFORE VISITING A HEALTH FACILITY: BY INCOME GROUP

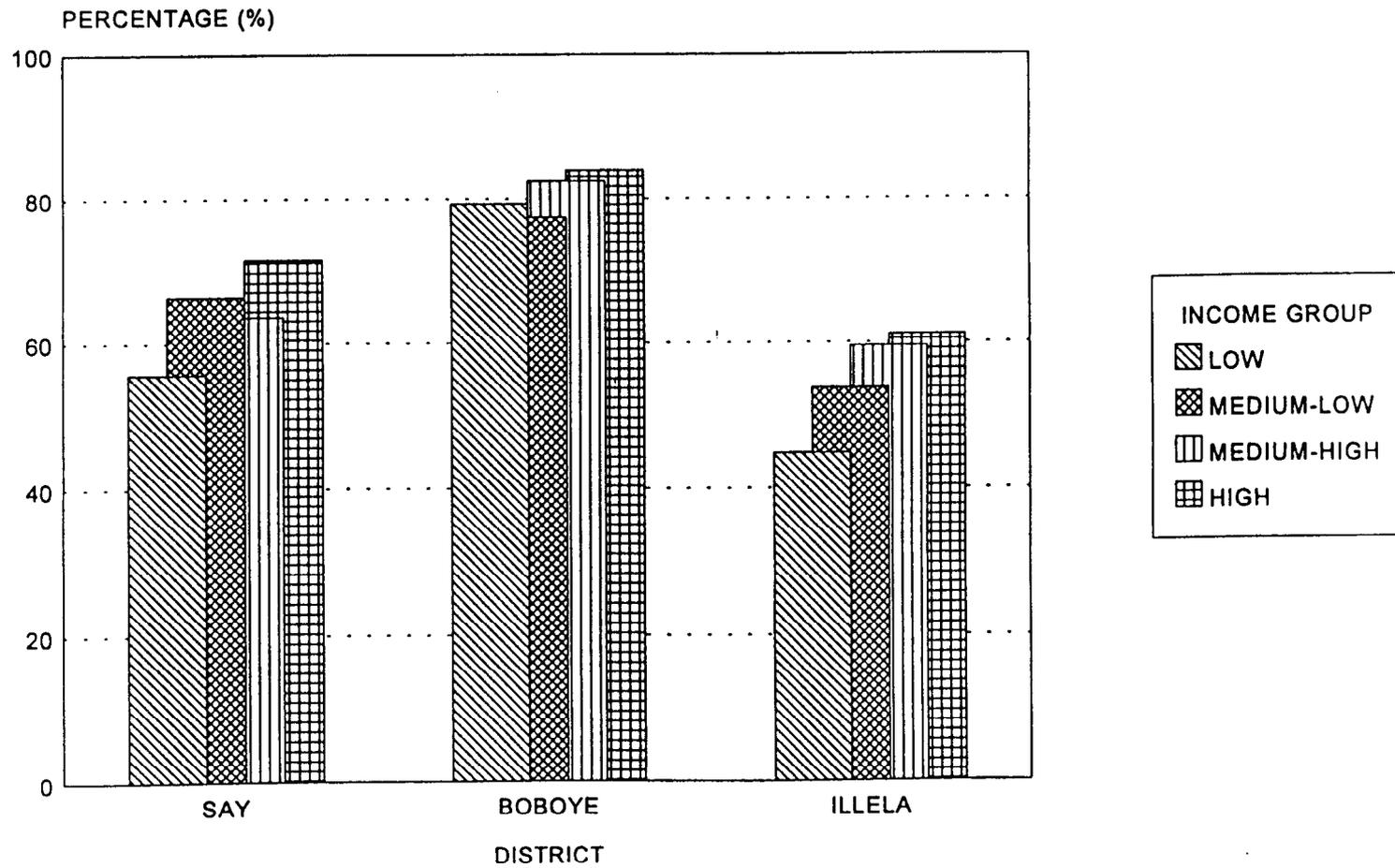
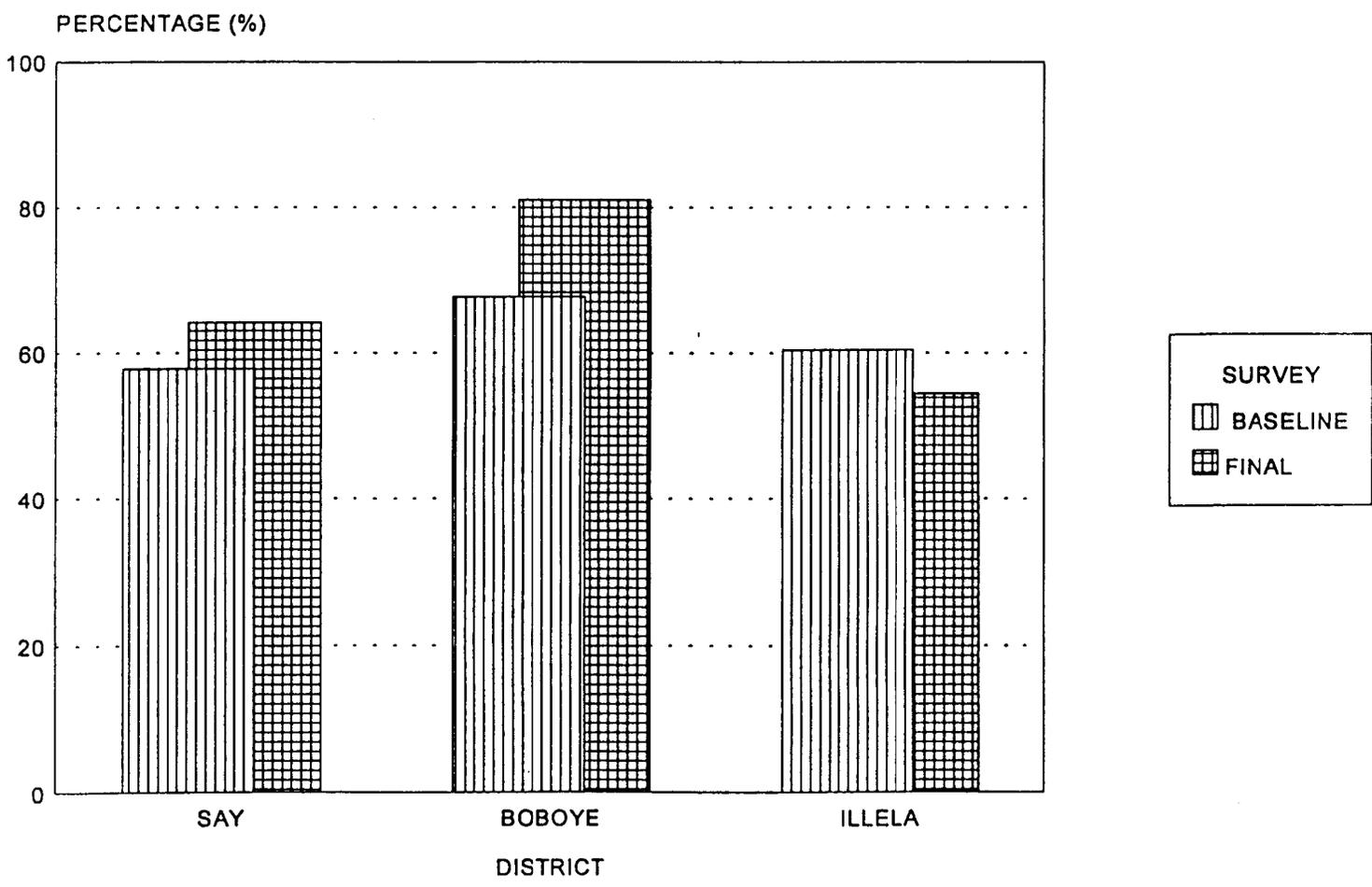


EXHIBIT 5.1c
PERCENTAGE OF PERSONS WITH AN ILLNESS WHO USED MEDICINES AT HOME
BEFORE VISITING A HEALTH FACILITY: COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS



In conclusion, the data from the two surveys indicate that the use of medicines at home before visiting a health facility was very common in the three districts. The tendency to use medicines at home did not vary by the demographic characteristics of the person who was ill. However, the tendency to use medicines at home was higher among the higher income groups and in the villages closest to the public health facilities before the pilot tests began. This trend continued in the Illéla control district after the tests began, but disappeared in the Boboye and Say districts after the tests began. In fact, in the test districts, the tendency to use medicines at home before visiting a health facility was similar among the different income groups and among the villages regardless of their distance from a public health facility.

B. 5.2 THE PURCHASE OF MEDICINES

The baseline survey had shown that purchasing medicines to treat an illness before consulting a drug provider was common in the three districts before the pilot tests began. The data from the final survey support the same conclusion. In the Illéla control district, the percentage of persons with an illness who purchased medicines before visiting a health facility was 33 percent. The figure was 44 percent for the Say district and 55 percent for the Boboye district (see *Table 5.2a*).

The demographic characteristics of the person who was ill did not seem to affect the tendency to purchase medicines before visiting a health facility—the differences noted among the three districts were observed for each demographic group as well (see *Table 5.2a*).

Exhibit 5.2a shows the variation in the tendency to purchase medicines before consulting a drug provider in relation to the time required to reach a public health facility. It is important to note that the trend is the same for purchasing medicines from pharmaceutical depots, as these depots, whether privately operated or cooperatives, are located near the public health facilities. The village health workers, however, who continue to be active, live outside the villages where public health facilities are located.

In the Say district, distance from a public health facility seems to have had no effect on the tendency to buy medicines before visiting a health facility after the pilot tests began. In the Boboye and Illéla districts, the percentage of individuals who purchased medicines before visiting a health facility increased as the distance by foot to the nearest public health facility increased.

Exhibit 5.2b describes the differences in the tendency to purchase medicines before having consulted any drug provider by the income group to which the sick person's household belongs. In the Say district, there was little association after the pilot tests began between the tendency to purchase medicines before visiting a health facility and income group. In the Boboye and Illéla districts, the percentage of individuals who purchased medicines increased as income increased.

Exhibit 5.2c summarizes the changes between the baseline and final surveys in the extent to which medicines were purchased before visiting a health facility. In the Illéla control district, the percentage of individuals who purchased medicines before making a visit a health facility remained at the same level during the baseline and final surveys. In the Boboye and Say districts, however, an increase was noted between the two surveys in the percentage of individuals who purchased medicines before visiting a health facility.

TABLE 5.2a
CARE AT HOME
PERCENTAGE OF INDIVIDUALS WHO REPORTED HAVING PURCHASED MEDICINES DURING THE TWO WEEKS PRECEDING
THE INTERVIEW BEFORE MAKING ANY VISIT TO A HEALTH FACILITY: BY SEVERAL SOCIO-DEMOGRAPHIC
CHARACTERISTICS AND BY DISTRICT
(AMONG THE PERSONS REPORTING AN ILLNESS)

	DISTRICT					
	SAY		BOBOYE		ILLELA	
	PURCHASED MEDICINES FOR CARE AT HOME	Number of Respondents	PURCHASED MEDICINES FOR CARE AT HOME	Number of Respondents	PURCHASED MEDICINES FOR CARE AT HOME	Number of Respondents
Age in Years						
0-4	44.7	244	57.0	223	33.1	248
5-14	50.0	232	57.8	251	37.7	191
15-44	40.2	219	50.2	283	33.1	320
45 +	36.8	152	54.7	179	29.8	168
Sex						
Male	43.8	429	57.6	429	33.4	440
Female	43.3	418	52.3	507	33.5	487
Ethnic Group						
DJERMA	48.6	181	56.2	721	33.3	3
HAUSA	50.0	54	32.5	40	34.3	776
FULANI	40.9	323	52.7	146	40.0	25
OTHERS	42.2	289	58.6	29	26.8	123
Strata						
With Pub. Health Fac.	36.2	116	43.0	149	24.2	132
Without Pub. Health Fac.	44.7	731	56.9	787	35.0	795
TOTAL	43.6	847	54.7	936	33.4	927

EXHIBIT 5.2a
PERCENTAGE OF PERSONS WITH AN ILLNESS WHO PURCHASED MEDICINES
BEFORE VISITING A HEALTH FACILITY: BY TIME BY FOOT TO THE PUBLIC HEALTH FACILITY

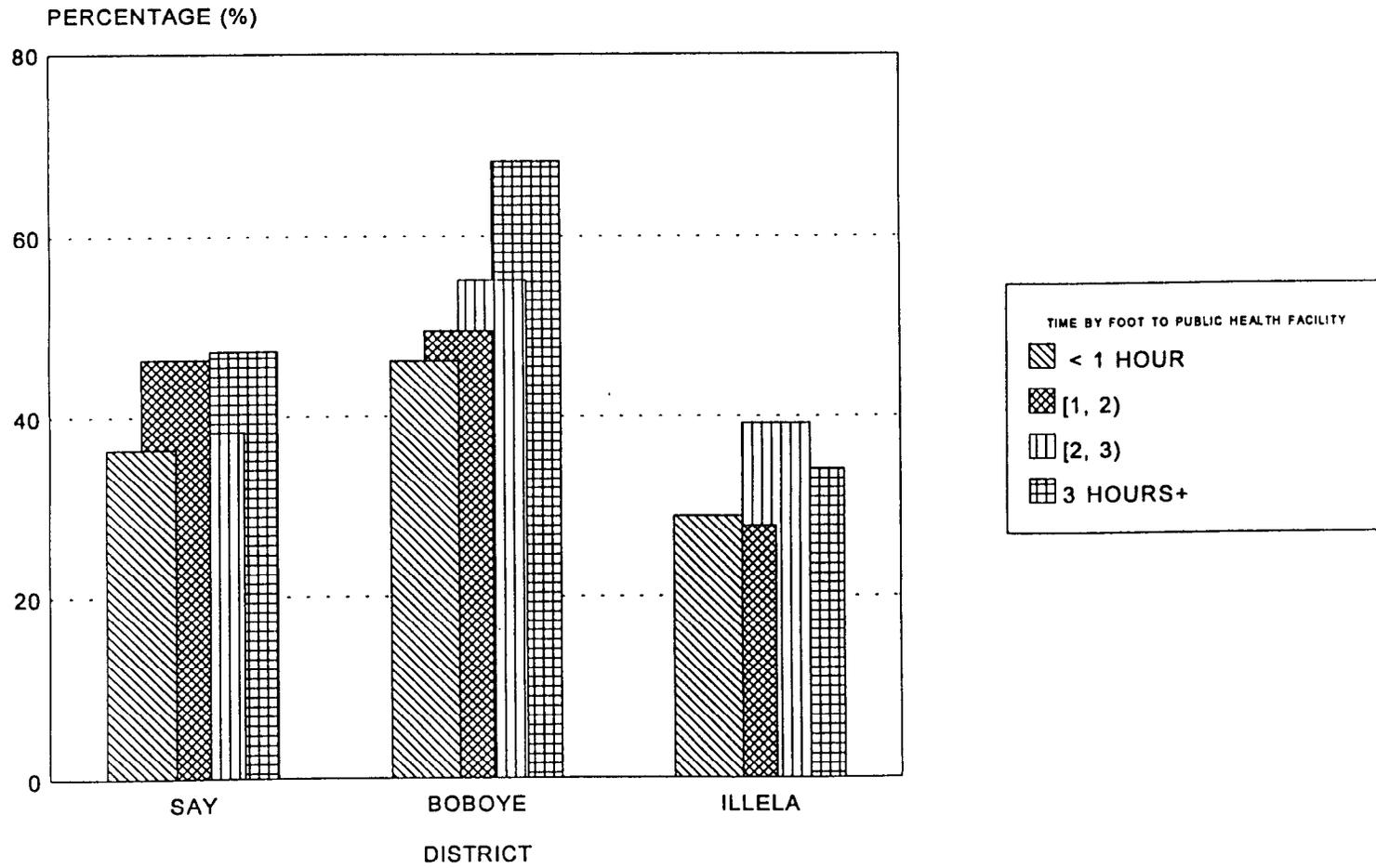
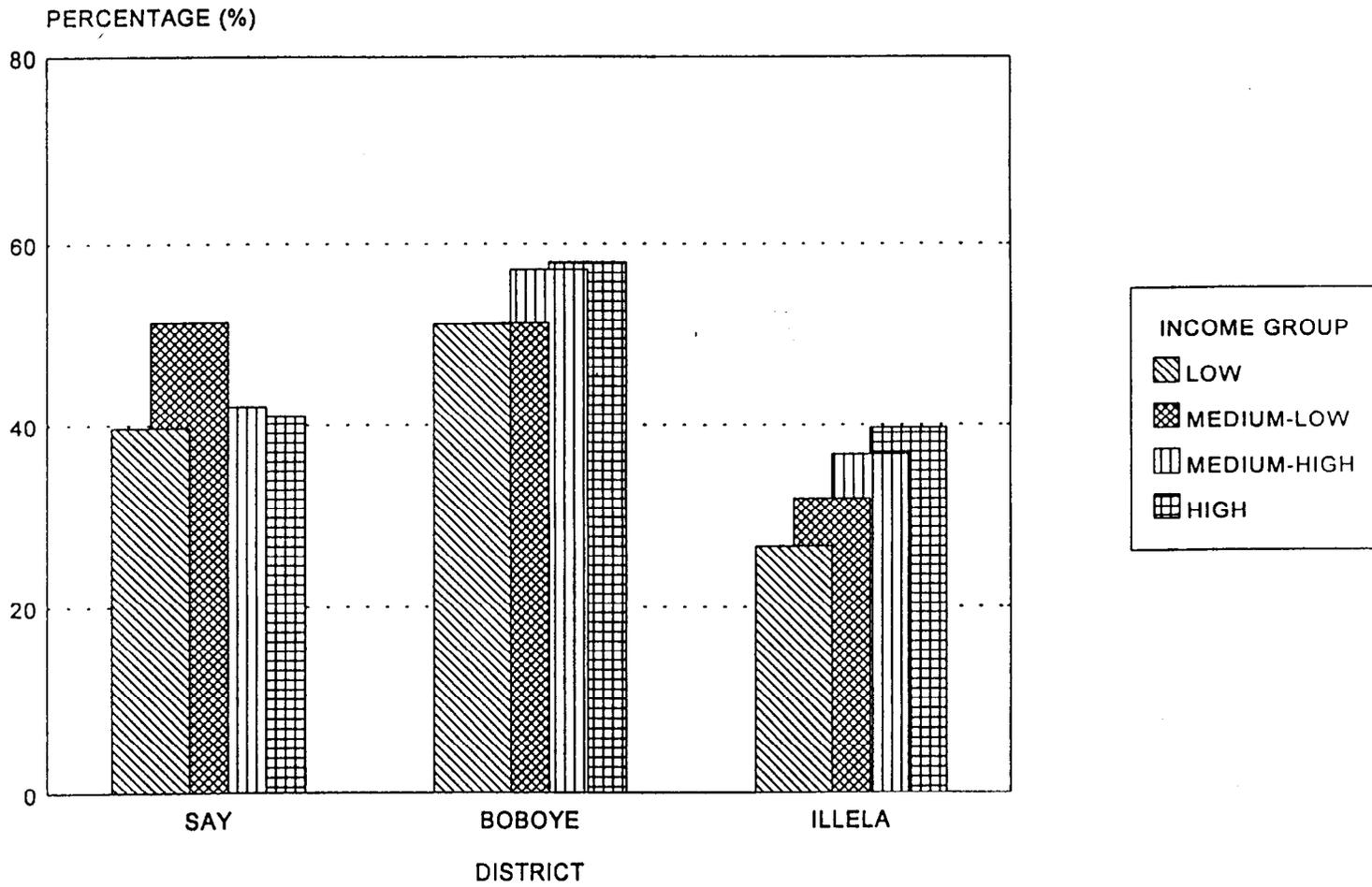


EXHIBIT 5.2b
PERCENTAGE OF PERSONS WITH AN ILLNESS WHO PURCHASED MEDICINES
BEFORE VISITING A HEALTH FACILITY: BY INCOME GROUP



Comparing the extent to which medicines were purchased with the distance from a public health facility, however, indicates that the purchase of medicines decreased in the three districts between the baseline and final surveys in the villages where public health facilities were located (see *Exhibit 5.2d*). Outside the villages where health facilities were located, however, the extent to which medicines were purchased before visiting a facility increased in the Boboye and Say test districts. In the Illéla control district, the levels observed on the baseline and final surveys were similar.

In conclusion, the two surveys indicate that purchasing medicines to treat an illness before visiting a public health facility was common in the three districts. The tendency to purchase medicines before a visit did not vary by the demographic characteristics of the person who was ill. However, this tendency was higher among the highest income groups in the Boboye and Illéla districts, whereas it was similar across all income groups in the Say district. The tendency to purchase medicines before visiting a health facility increased in the Boboye and Say test districts compared to the Illéla control district, where the same level was observed before and after the pilot tests began. Within the three districts, however, the tendency to purchase medicines decreased between the two surveys in the villages where public health facilities were located; outside these villages, however, the extent to which medicines were purchased before visiting a public health facility increased in the test districts. It is interesting to see how the sources supplying the medicines purchased before visiting a health facility changed between the baseline period and the test period.

C.

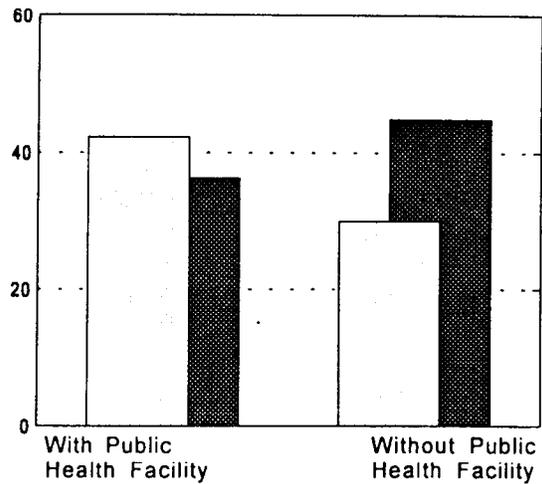
5.3 SOURCES FOR PURCHASING MEDICINES

In the three districts, the main sources for obtaining medicines outside the public health facilities are: 1) the local pharmacies and the pharmaceutical depots, 2) the village health workers, and 3) the informal market. Concerning the first group, only the Boboye district has a public pharmacy, located in the district's administrative seat; the pharmacy is part of the ONPPC's distribution network. The administrative seat of the Say district has a private pharmacy operated by the Association des Femmes de Niger (Women's Association of Niger); other private pharmaceutical depots are located near the district's public health facilities. Most of the pharmaceutical depots in the Illéla district, which are located near public health facilities, are operated by local cooperatives. In regards to village health workers the activities of these workers have been affected by the dissolution of the network of village health teams, of which they were a part. In the Say district, however, supervision of the village health teams under the Primary Health Care Support Project has kept some village health workers active in several villages. Moreover, in 1993, Belgian medical assistance gave a new boost to the village health teams in the Dosso province, where Boboye is located. It should be kept in mind that the village health workers are active only in villages that do not have a health facility. The third group, the informal market, includes both itinerant merchants and vendors installed at permanent marketplaces in several large villages.

Table 5.3 shows the sources in the three districts for purchasing medicines for care at home. In the three districts, between 10 and 12 percent of those who were ill obtained medicines from a pharmacy or pharmaceutical depot. The other 90 percent obtained their medicines either from a village health worker or through the informal market.

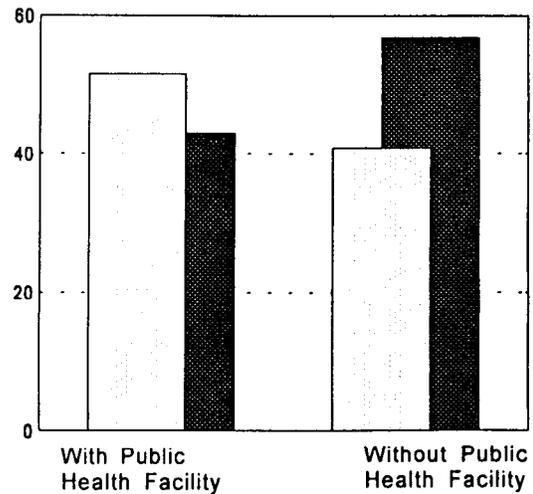
EXHIBIT 5.2D PERCENTAGE OF PERSONS WITH AN ILLNESS WHO PURCHASED MEDICINES BEFORE VISITING A PUBLIC HEALTH FACILITY: COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS

PERCENTAGE (%)



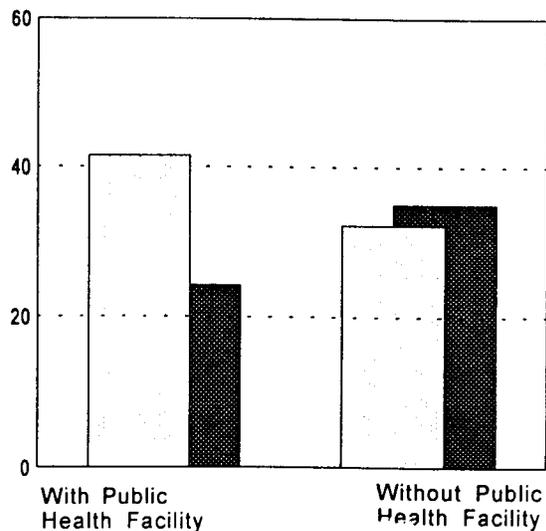
SAY DISTRICT

PERCENTAGE (%)



BOBOYE DISTRICT

PERCENTAGE (%)



ILL T

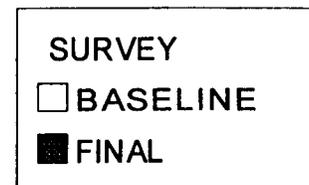


TABLE 5.3
PROPORTION (%) OF PERSONS WITH AN ILLNESS WHO PURCHASED MEDICINES BEFORE MAKING
ANY VISIT TO A GIVEN HEALTH FACILITY: BY THE SOURCE OF THE MEDICINES,
SEVERAL ECONOMIC CHARACTERISTICS OF THE HOUSEHOLD, AND DISTRICT
(AMONG THE PERSONS WITH AN ILLNESS WHO PURCHASED MEDICINES BEFORE VISITING A HEALTH FACILITY)

	SOURCE OF MEDICINES FOR CARE AT HOME				
DISTRICT	PHARMACY	HEALTH CARE WORKER	AT THE MARKET	TOTAL	Number of Individuals
SAY					
Time by Foot to the Nearest Health Facility					
< 2 hrs.	19.4	28.8	51.8	100.0	170
2 hrs or more	6.0	41.2	52.8	100.0	199
Income Group					
Low	7.6	40.1	52.3	100.0	197
High	17.4	30.2	52.3	100.0	172
TOTAL - SAY	12.2	35.5	52.3	100.0	369
BOBOYE					
Time by Foot to the Nearest Health Facility					
< 2 hrs	15.3	17.8	66.9	100.0	242
2 hrs. or more	7.4	55.9	36.7	100.0	270
Income Group					
Low	5.0	42.3	52.7	100.0	220
High	15.8	34.6	49.7	100.0	292
TOTAL - BOBOYE	11.1	37.9	51.0	100.0	512
ILLELA					
Time by Foot to the Nearest Health Facility					
< 2 hrs.	12.5	1.1	86.4	100.0	88
2 hrs. or more	9.5	24.3	66.2	100.0	222
Income Group					
Low	6.6	15.9	77.5	100.0	151
High	13.8	19.5	66.7	100.0	159
TOTAL - ILLELA	10.3	17.7	71.9	100.0	310

There was a sharp difference between the Illéla control district, and the test districts, with regard to the share of medicines purchased from the village health workers and from the informal market. In the Illéla control district, 72 percent of those with an illness bought their medicines from the informal market and 18 percent from a village health worker. In the Boboye district, 51 percent of those with an illness bought their medicines from the informal market and 38 percent from the village health workers. In the Say district, these figures were 52 percent and 36 percent respectively.

Exhibit 5.3a shows the variations in the sources for purchasing medicines in the three districts according to the distance from the public health facilities and, by extension, the distance from the pharmaceutical depots. Among the villages located less than an hour by foot from the health facilities, 13 percent of the persons with an illness purchased medicines at a pharmaceutical depot in the Illéla control district, 15 percent in the Boboye district, and 19 percent in the Say district. For those who lived more than two hours from the health facilities, the percentage who obtained their medicines from the pharmaceutical depots fell to 10 percent for Illéla, 7 percent for Boboye, and 6 percent for Say.

In the villages located less than two hours by foot from the health facilities in the Illéla control district, more than 86 percent of the persons with an illness purchased medicines from the informal market. In the villages farthest away, this figure fell to 66 percent—24 percent of those who were ill continued to get their medicines from the village health workers.

In the Boboye district, the percentage of persons with an illness who bought their medicines from the informal market was higher in the villages located near the health facilities than in the villages that were farthest away. In fact, more than 56 percent of those with an illness who lived more than two hours by foot from the health facilities bought their medicines from village health workers. In the Say district, the extent to which medicines were purchased from the informal market was similar among the villages both near and far from health facilities. Purchasing medicines from a village health worker, however, was more common among the villages that were more remote from the health facilities.

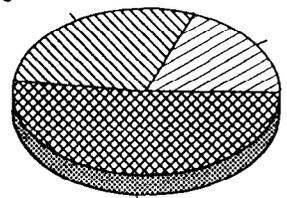
Exhibit 5.3b shows the distribution of the sources of medicines among the low and high income groups. As can be expected, a large percentage of those who were ill and were in the high income group bought their medicines from pharmaceutical depots compared to those from the low income groups. Most of the poor bought their medicines from the informal market. This was much more common in the Illéla control district than in the Boboye and Say test districts, where village health workers were a significant source of medicines among the poorest households.

The sources for purchasing medicines for care at home differed widely between the baseline and final surveys (see *Exhibit 5.3c*). The first observation to be made is that the percentage of persons with illnesses who purchased their medicines from pharmaceutical depots decreased by more than half in the three districts. The extent of this decrease in the Illéla control district indicates that this trend was not entirely related to the introduction of cost recovery in the test districts.

Graph 5.3a
DISTRIBUTION (%) OF PERSONS WITH AN ILLNESS WHO PURCHASED MEDICINES BEFORE VISITING A HEALTH FACILITY: BY THE SOURCE OF THE MEDICINES AND THE TIME BY FOOT TO THE NEAREST PUBLIC FACILITY

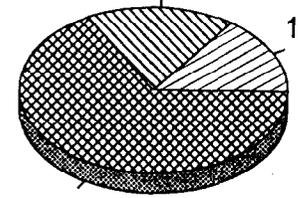
FIRST-AID WORKER
28.8

PHARMACY
19.4



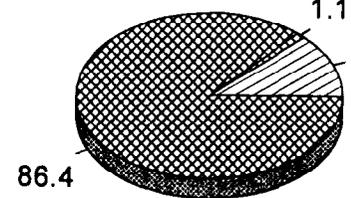
MARKET
51.8
SAY - < 2 HOURS

17.8
15.3



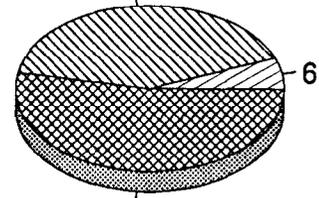
66.9
BOBOYE - < 2 HOURS

1.1
12.5



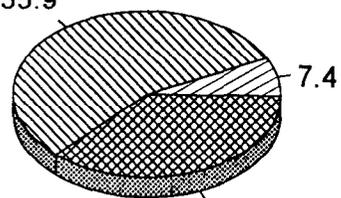
86.4
ILLELA - < 2 HOURS

41.2



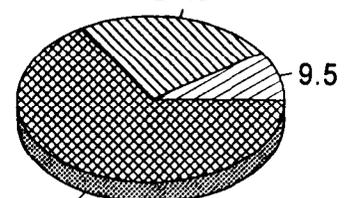
52.8
SAY - 2 HOURS+

55.9



36.7
BOBOYE - 2 HOURS+

24.3

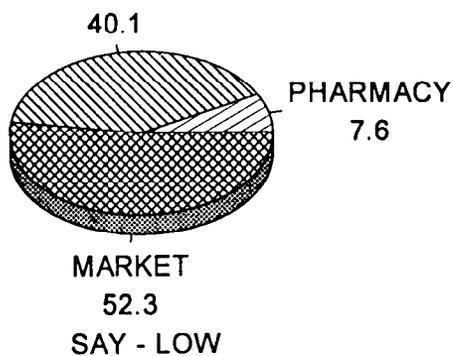


66.2
ILLELA - 2 HOURS+

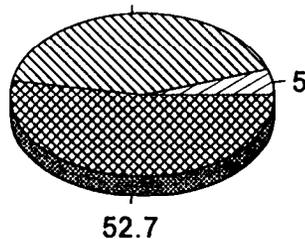
Graph 5.3b

DISTRIBUTION (%) OF PERSONS WITH AN ILLNESS WHO PURCHASED MEDICINES BEFORE VISITING A HEALTH FACILITY BY THE SOURCE OF THE MEDICINES AND INCOME GROUP

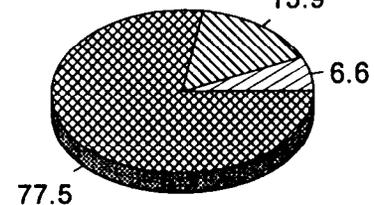
FIRST-AID WORKER



42.3

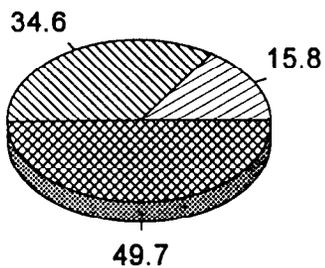
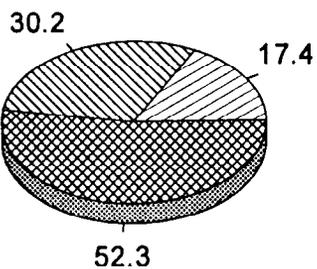


15.9

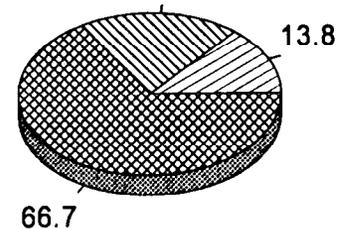


BOBOYE - LOW

ILLELA - LOW



19.5



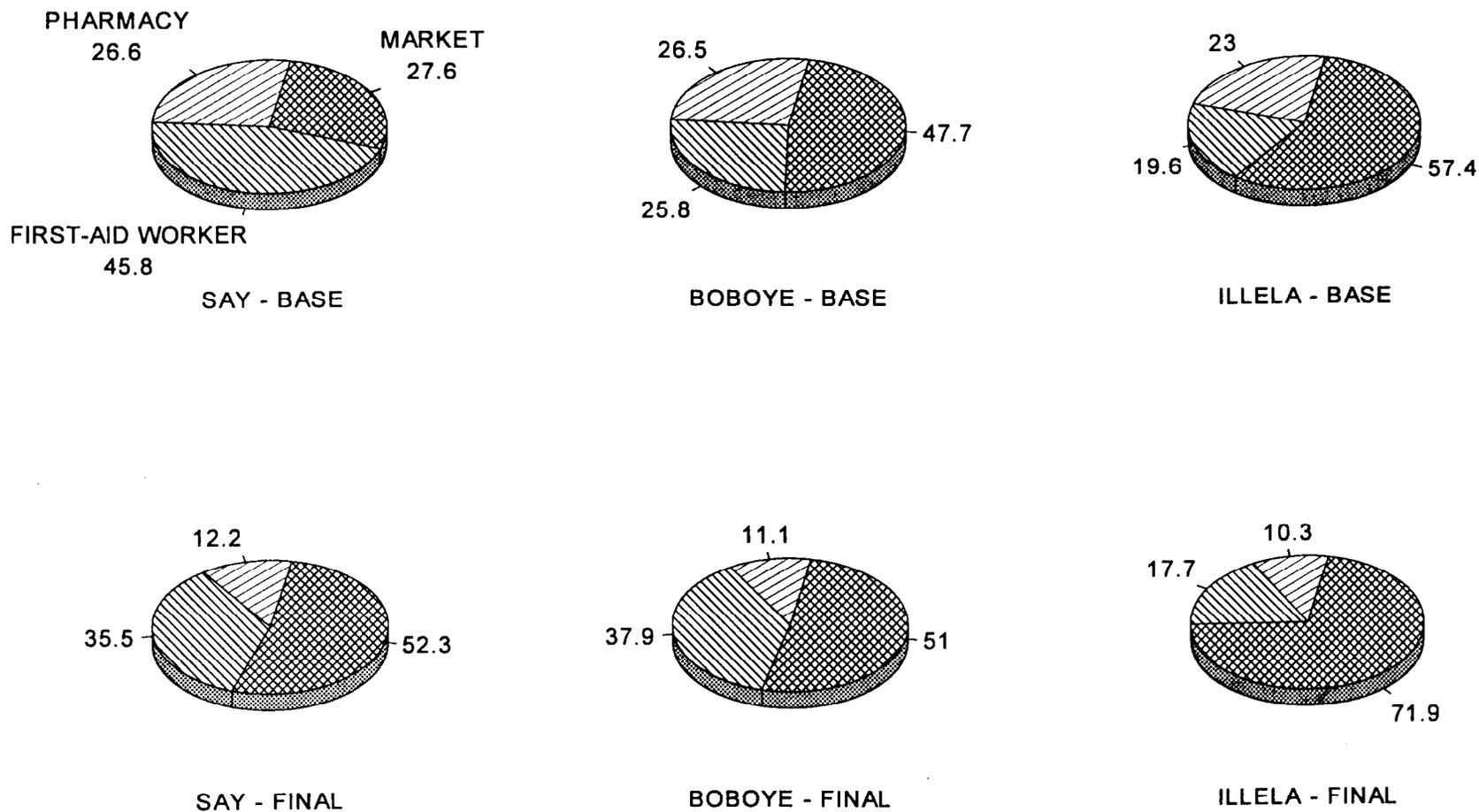
SAY - HIGH

BOBOYE - HIGH

ILLELA - HIGH

Graph 5.3c

DISTRIBUTION (%) OF PERSONS WITH AN ILLNESS WHO PURCHASED MEDICINES BEFORE VISITING A HEALTH FACILITY BY THE SOURCE OF THE MEDICINES: COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS



In fact, in the Illéla control district, among the ill persons who lived less than two hours by foot from the health facilities, 54 percent of those in the baseline survey who purchased medicines for care at home bought them from pharmaceutical depots. In the final survey, the figure fell to 13 percent for this subgroup. The same trend was observed among those who were in the highest income groups. These trends reflect in part the difficulties in replenishing the supplies of essential medicines which occurred during 1993, and in part the management difficulties that several pharmaceutical depots experienced. These management difficulties resulted in decreased sales. Only one of the five pharmaceutical depots in the Illéla district can be described as having been consistently well managed in 1993.

In the Boboye and Say test districts, the difficulties in replenishing essential medicines which occurred in 1993 and the stocking of medicines at the test public health facilities sharply reduced the amount of medicines sold at pharmaceutical depots. It is difficult to separate the role that each of these two factors played in the decline of sales at the pharmaceutical depots.

Exhibit 5.3c shows, however, that the market share lost by the pharmaceutical depots in the Illéla district was picked up by the informal market. In fact, in the baseline survey, 57 percent of those with an illness who purchased medicines before visiting a health facility bought their medicines from the informal market. In the final survey, this figure increased to 72 percent. The trend in the Say test district was similar to the trend in Illéla. Only in Boboye was the market share lost by the district's pharmaceutical depots picked up by the village health workers.

In conclusion, the main sources for purchasing medicines in the three districts, aside from the public health facilities, are the local pharmacies and pharmaceutical depots, village health workers, and the informal market. For care at home, these were the sources that those with an illness used for buying medicines before visiting a public health visit, if they visited one at all. However, the formal sector for medical distribution experienced difficulties replenishing its supplies as a result of nationwide interruptions in the supplies of essential medicines in 1993. In the Boboye and Say test districts, the diminishing role of the local pharmacies and pharmaceutical depots was exacerbated by the initial supplies of medicines provided to the public health facilities for the pilot test on cost recovery.

Between the baseline and final surveys, the percentage of persons who were ill and who bought their medicines from pharmaceutical depots decreased by more than half in the three districts. The extent of this decrease in the Illéla control district indicates that it was not entirely related to the introduction of cost recovery in the test districts. In fact, the market share lost by the pharmaceutical depots in the Illéla control district was gained by the informal market. The Say district showed a similar trend. By contrast, in the Boboye test district, the market share lost by the district's pharmaceutical depots was picked up by the village health workers. The increased role of the informal market as a source for purchasing medicines before visiting a given health facility in the Illéla control district, and to a lesser extent in the Say district, affected all the socio-economic groups equally, regardless of their level of income or their distance from the public health facilities.

VI.0 6.0 USE OF THE PUBLIC HEALTH FACILITIES

The analysis in this section will focus on the use of the public health facilities. The data from the baseline survey have shown that use of alternative health care providers, i.e., private clinics and traditional healers, was very low in the three districts. This conclusion was confirmed by the data from the final survey (see *Table 6.0*). In the three districts, when people are ill and seek care outside the home, almost all of them visit a public health facility.

We shall first compare the use of public health facilities before and after the pilot tests began. Then, we shall examine changes in the continuity of health care, how those who were ill perceived the availability of medicines at public health facilities, and the practice of prescribing medicines. Finally, we shall summarize the extent to which patients paid for their treatment at public health facilities.

A. 6.1 THE LEVELS OF USE

Exhibit 6.1a shows the changes between the baseline and final surveys in the use of the public health facilities in the three districts. In the Illéla control district, the use of the public health facilities decreased between the test period and the period before the tests began from 10 percent to 7 percent. As was noted earlier in this report, although the two surveys were conducted during the same time of the calendar year, the baseline study was conducted after the millet harvest in 1992. Because of the late growing season in 1993, however, the final survey was conducted while millet was being harvested. During harvest time, the opportunity costs of rural household members are relatively high. This partly accounts for the decreased use of the facilities in the Illéla control district.

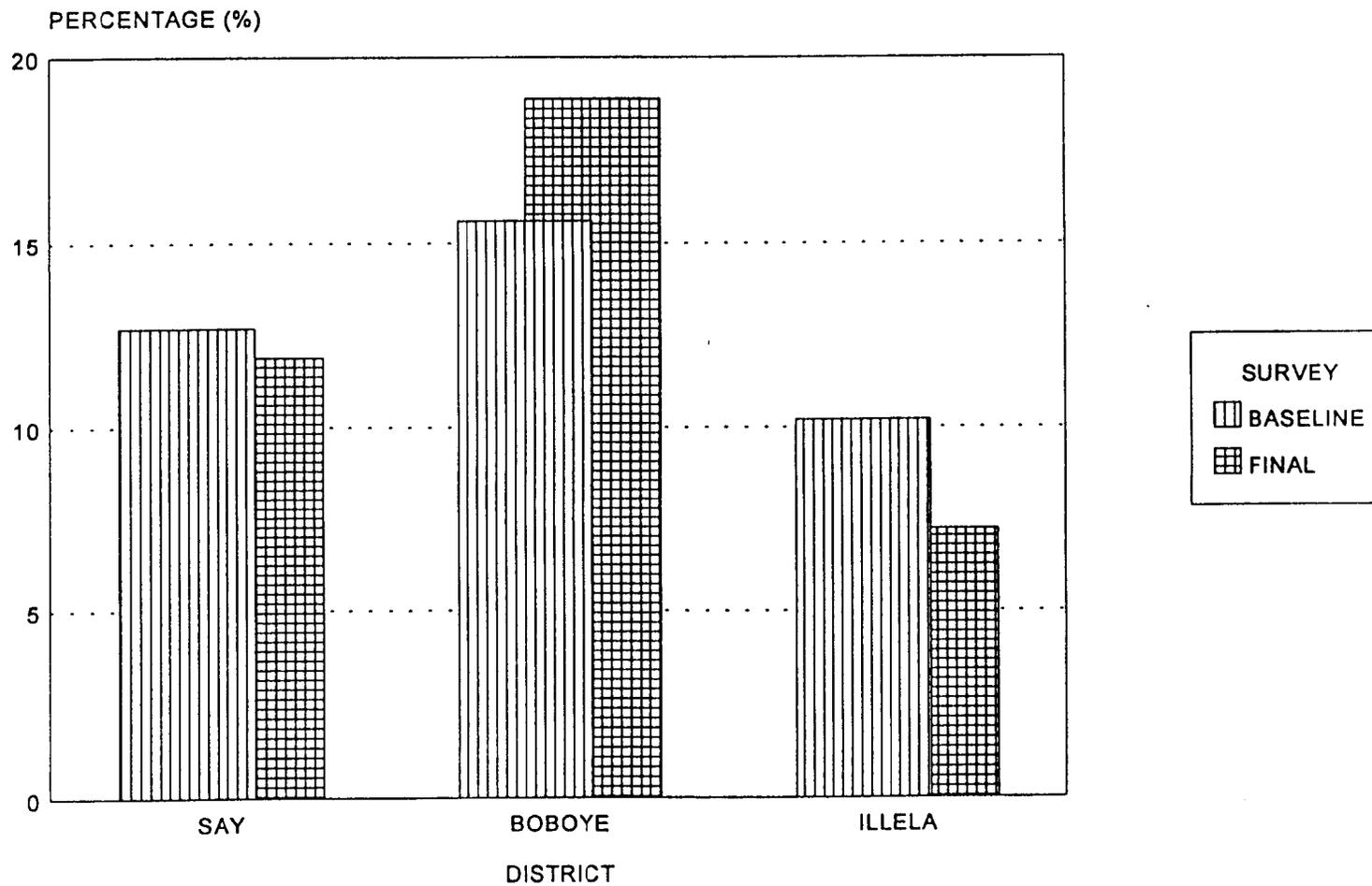
In the Say district, where the direct payment method was used, the use of public health facilities remained at the same level between the period before the tests began and the test period. The level of use was 13 percent before the pilot tests, and 12 percent during the tests. The net effect of the greater availability of medicines and of payment at public health facilities appears to have offset the decrease observed in the Illéla control district.

In the Boboye district, where the indirect payment method was tested, the use of public health facilities increased from 15.6 percent during the baseline survey to 18.9 percent during the final survey. A comparison between the Boboye district and Say district suggests that the direct payment of 200 FCFA in Say served as a deterrent in the use of the public health facilities for certain segments of the population.

TABLE 6.0
 CARE OUTSIDE THE HOME
 PERCENTAGE (%) OF PERSONS WITH AN ILLNESS WHO SOUGHT CARE
 OUTSIDE THE HOME: BY THE FIRST CHOICE FOR HEALTH CARE BY DISTRICT
 (AMONG PERSONS REPORTING AN ILLNESS)

CARE OUTSIDE THE HOME	DISTRICT		
	SAY	BOBOYE	ILLELA
NO	87.0	79.2	90.6
YES			
PUBLIC	11.9	18.9	7.2
PRIVATE	0.1		0.2
HEALER	0.8	1.8	1.7
OTHER	0.1	0.1	0.2
TOTAL	100.0	100.0	100.0
<i>Number of Respondents</i>	847	936	927

EXHIBIT 6.1a
PERCENTAGE OF PERSONS WITH AN ILLNESS WHO VISITED A PUBLIC HEALTH FACILITY
DURING THE TWO WEEKS PRECEDING THE INTERVIEW: COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS



The data from the household surveys support the data from the health facilities.⁶ On average, the percentage of persons with an illness who used public health facilities increased in the Boboye district; in the Say district, use decreased slightly; and in the Illéla district, use also decreased during the test period.

The decrease in the use of the public health facilities in the Illéla control district equally affected all demographic groups. In the Say test district, the same levels of use were observed between the baseline and final surveys for women and children. In the Boboye test district, use of health facilities by women increased from 15 percent on the baseline survey to 20 percent on the final survey—an increase of 32 percent. The increase in use by children between the baseline and final surveys was similar to the increase by women.

Exhibits 6.1b, 6.1c, and 6.1d show the trends in the use of public health facilities between the baseline and final surveys according to respondent's distance from the health facilities of the Illéla control district, the Say test district, and the Boboye test district, respectively.

The most striking trend in all three districts was the sharp decrease in the use of the public health facilities by those who lived more than an hour away by foot. The same pattern was seen in both the baseline and final surveys. The difference observed in the use of public health facilities within each of the three districts according to the distance from the facilities were significantly more pronounced than the differences in use among the three districts and the differences observed between the baseline and final surveys within a given district. In other words, the use of the public health facilities was more affected by the time required to reach the health facilities than by the payment method and fees charged to use the facilities' services.

In addition, *Exhibit 6.1b* indicates that in the Illéla control district those who lived near the health facilities decreased their use of the facilities. In fact, use of health facilities decreased from 30 percent before the pilot tests began to 21 percent during the tests among those who lived less than an hour by foot from the public health facilities. For those who lived more than an hour by foot from the public health facilities, use of the facilities remained at the very low level observed before the pilot tests began, that is, less than 5 percent. In the Illéla control district, 30 percent of the population lived less than an hour by foot from the public health facilities, and 70 percent lived more than an hour by foot from the facilities (*see Table 3.2c*).

⁶During the first six months after payment for care began in the test districts, the number of new clients at public health facilities decreased by 5 percent in the Illéla control district and by 10 percent in the Say district. The number of new clients increased by 37 percent in the Boboye district.

Diop, F. et al. (1993). Rapport Semestriel sur les Performances du Recouvrement des Coûts: Arrondissements de Boboye et de Say, Mai à Octobre 1993 [Six-Month Report on the Performance of Cost Recovery: Boboye and Say Districts, May to October 1993]. Pilot Tests on Cost Recovery in the Non-Clinical Sector. Ministry of Public Health - Health Financing and Sustainability Project. Niamey: November 16 (draft).

EXHIBIT 6.1b - ILLELA DISTRICT
PERCENTAGE OF PERSONS WITH AN ILLNESS WHO VISITED A PUBLIC HEALTH FACILITY DURING THE TWO WEEKS
PRECEDING THE INTERVIEW: BY THE TIME BY FOOT TO THE NEAREST PUBLIC HEALTH FACILITY

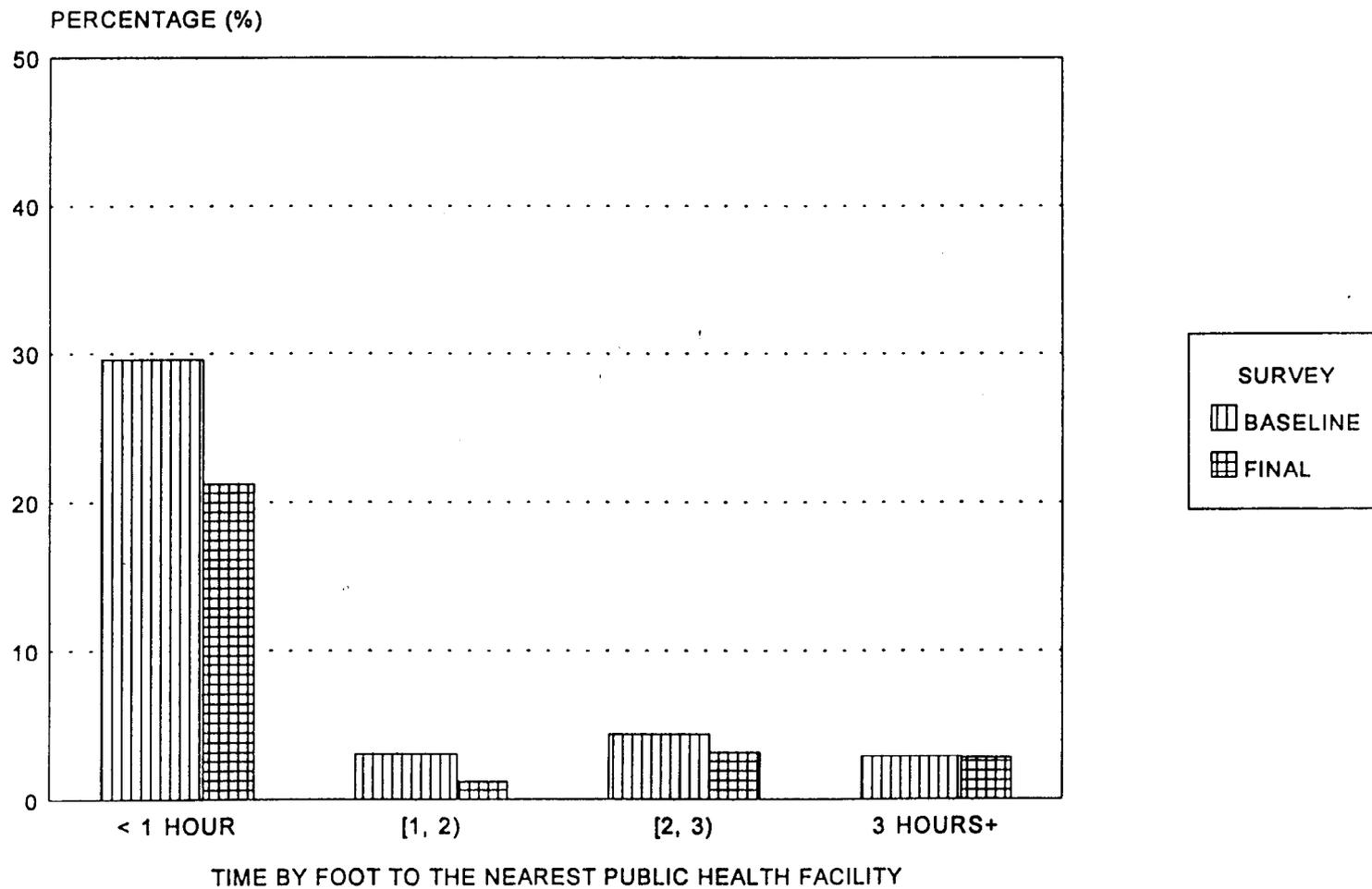


EXHIBIT 6.1c - SAY DISTRICT
PERCENTAGE OF PERSONS WITH AN ILLNESS WHO VISITED A PUBLIC HEALTH FACILITY DURING THE TWO WEEKS
PRECEDING THE INTERVIEW: BY THE TIME BY FOOT TO THE NEAREST PUBLIC HEALTH FACILITY

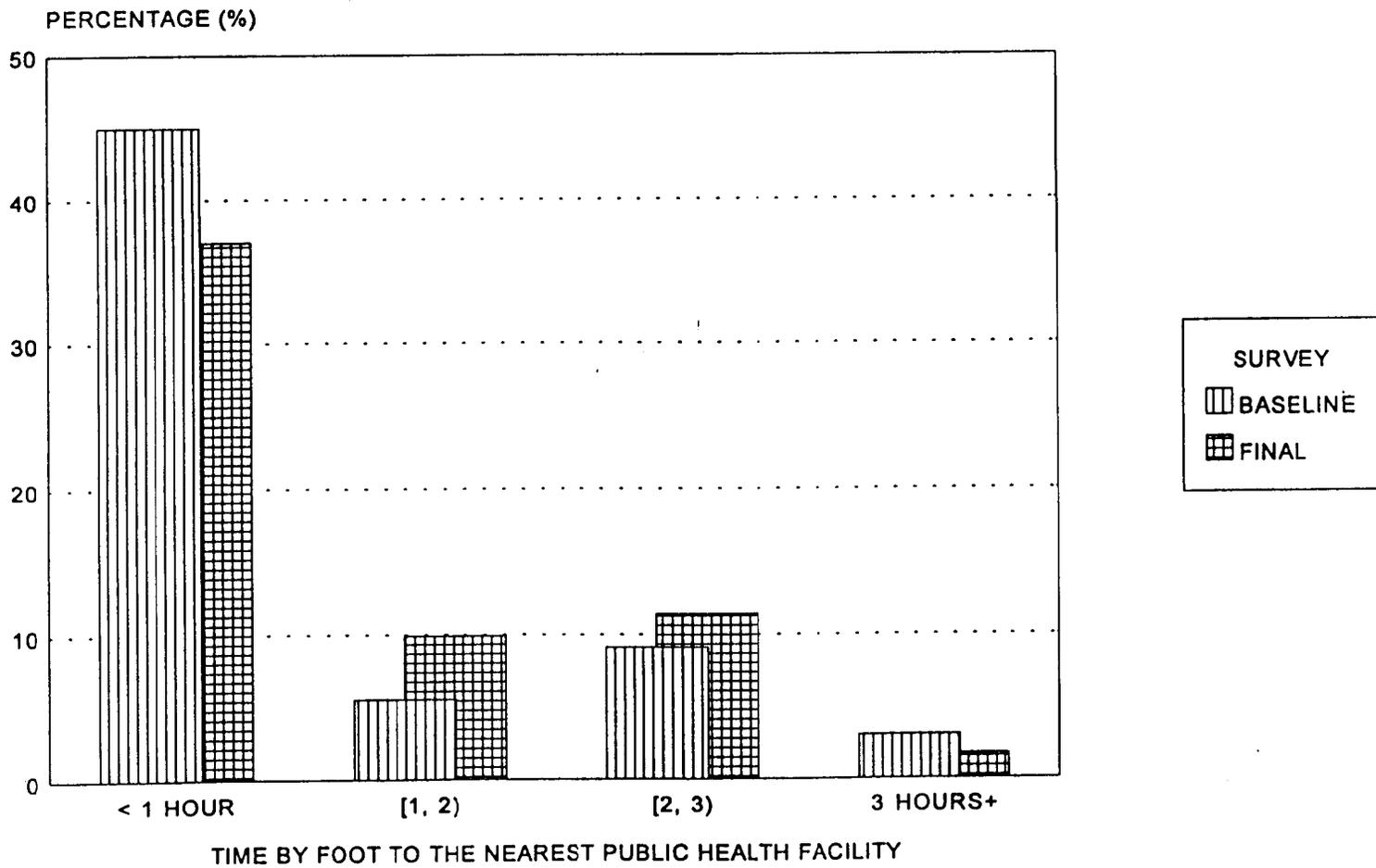
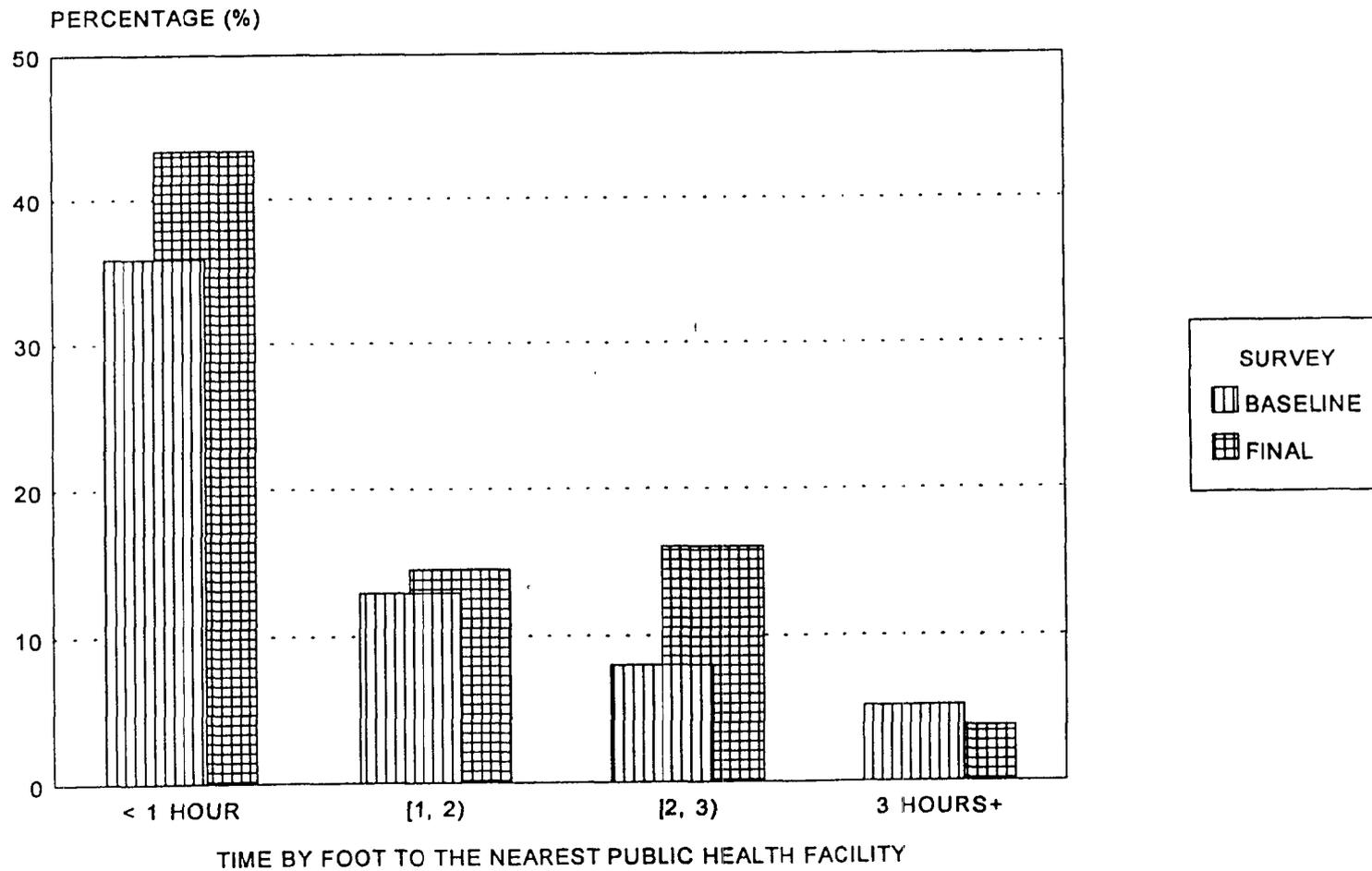


EXHIBIT 61d - BOBOYE DISTRICT
PERCENTAGE OF PERSONS WITH AN ILLNESS WHO VISITED A PUBLIC HEALTH FACILITY DURING THE TWO WEEKS
PRECEDING THE INTERVIEW: BY THE TIME BY FOOT TO THE NEAREST PUBLIC HEALTH FACILITY



In the Say test district, the use of the public health facilities by those who were ill and who lived less than an hour by foot from the facilities decreased slightly from a high level of 45 percent before payment for care was introduced to 37 percent after payment for care began (*see Exhibit 6.1c*). Among those who lived more than an hour by foot from the public health facilities, use increased slightly between the baseline and final surveys. These findings suggest that the payment of 200 CFAZ at the public health facilities improved the efficiency of the use of health facilities among those who lived in villages where facilities were located. Furthermore, persons who lived in villages far from health facilities were attracted by the greater availability of medicines at the public health facilities despite the payment charged for care.

Eighteen (18) percent of the population in the Say district lived less than an hour by foot from a public health facility, 49 percent lived between one and three hours from a facility, and 33 percent lived more than three hours by foot from a facility (*see Table 3.2c*).

In the Boboye test district, the use of the public health facilities by persons with an illness who lived less than an hour by foot from a facility increased from 36 percent before payment for care was introduced to 43 percent after payment for care was introduced—an increase of 21 percent (*see Exhibit 6.1d*). Among the ill who lived between one and three hours by foot from a public health facility, use of the facilities increased from about 11 percent to 15 percent—an increase of 42 percent. Among those who lived more than three hours by foot from a public health facility, use remained at the low level observed before the tests began.

It does not appear that the 50 FCFA co-payment per illness under the indirect payment method used in the Boboye district reduced the use of the public health facilities among those who lived in villages close to the public health facilities. Despite the increased use of public health facilities by people who lived more than an hour by foot from these facilities, the time required by foot to reach the public health facilities acted as a way of returning health care. This factor puts the villages that are far from the health facilities at a disadvantage.

In the Boboye district, 23 percent of the population lived less than an hour by foot from a health facility, 51 percent lived between one and three hours away, and 26 percentage lived more than three hours by foot (*see Table 3.2c*).

Exhibit 6.1e, 6.1f, and 6.1g summarize for the Illéla, Say, and Boboye districts respectively the changes in the use of public health facilities between the baseline and final surveys according to the income levels of those who were ill.

In the three districts, the higher a household's monetary income, the more its members used public health facilities before the pilot tests began. In the Illéla control district, this trend continued after the pilot tests began (*see Exhibit 6.1e*). The decreased use of public health facilities between the baseline and final surveys, however, equally affected all income groups.

In the Say district, the use of public health facilities decreased between the baseline and final surveys among persons with an illness who were in the 25 percent of households with the highest income (*see Exhibit 6.1f*). A similar decrease occurred among those who were in the 25 percent of households with the lowest income. For the intermediate income groups, however, use increased substantially between the two surveys. It rose from 6.5 percent on the baseline survey to 12.2 percent on the final survey.

EXHIBIT 6.1e - ILLELA DISTRICT
PERCENTAGE OF PERSONS WITH AN ILLNESS WHO VISITED A PUBLIC HEALTH FACILITY DURING THE TWO WEEKS
PRECEDING THE INTERVIEW: BY INCOME GROUP-- BASELINE AND FINAL SURVEYS

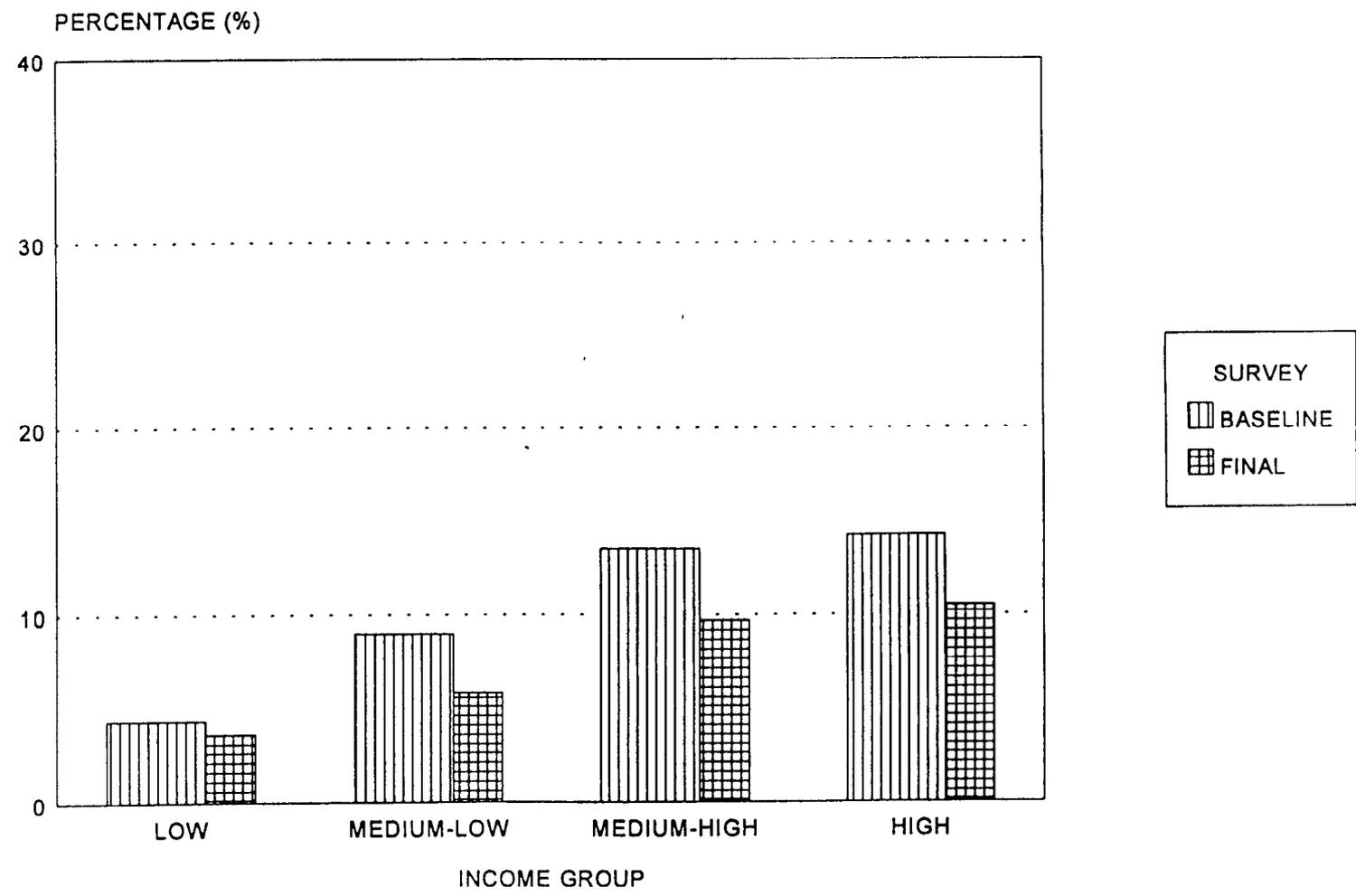
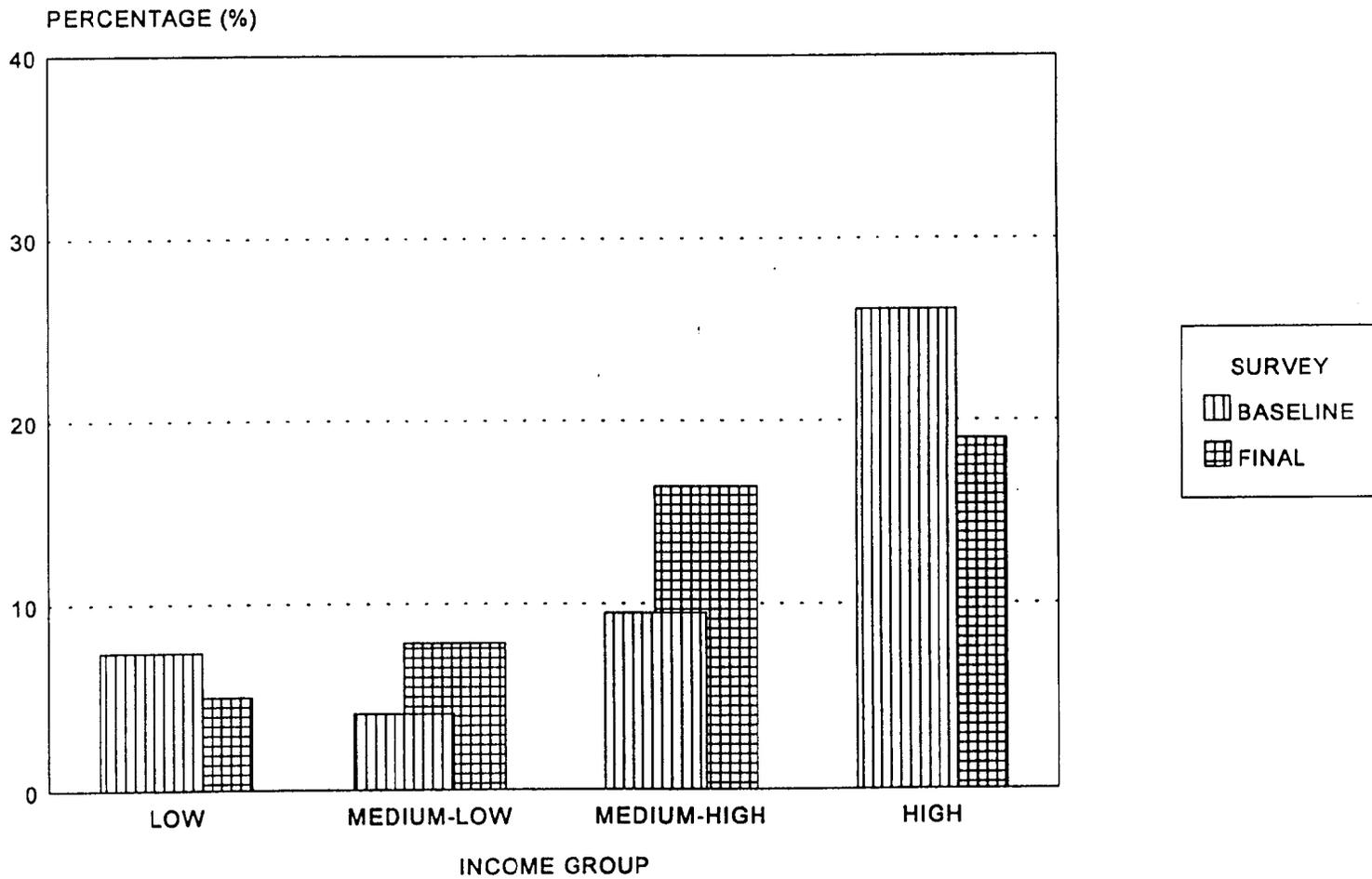


EXHIBIT 6.1f - SAY DISTRICT
PERCENTAGE OF PERSONS WITH AN ILLNESS WHO VISITED A PUBLIC HEALTH FACILITY DURING THE TWO WEEKS
PRECEDING THE INTERVIEW: BY INCOME GROUP--BASELINE AND FINAL SURVEYS



In the Boboye district, the use of public health facilities remained the same during the baseline and final surveys among people in the intermediate income groups (*see Exhibit 6.1g*). Use increased significantly between the baseline and final surveys, however, among people in the highest income groups. Among those who belonged to the 25 percent of households with the lowest income, use of the public health facilities doubled between the baseline and final surveys, increasing from 8.4 percent to 17.2 percent.

B.

6.2 ASPECTS CONCERNING THE QUALITY OF CARE

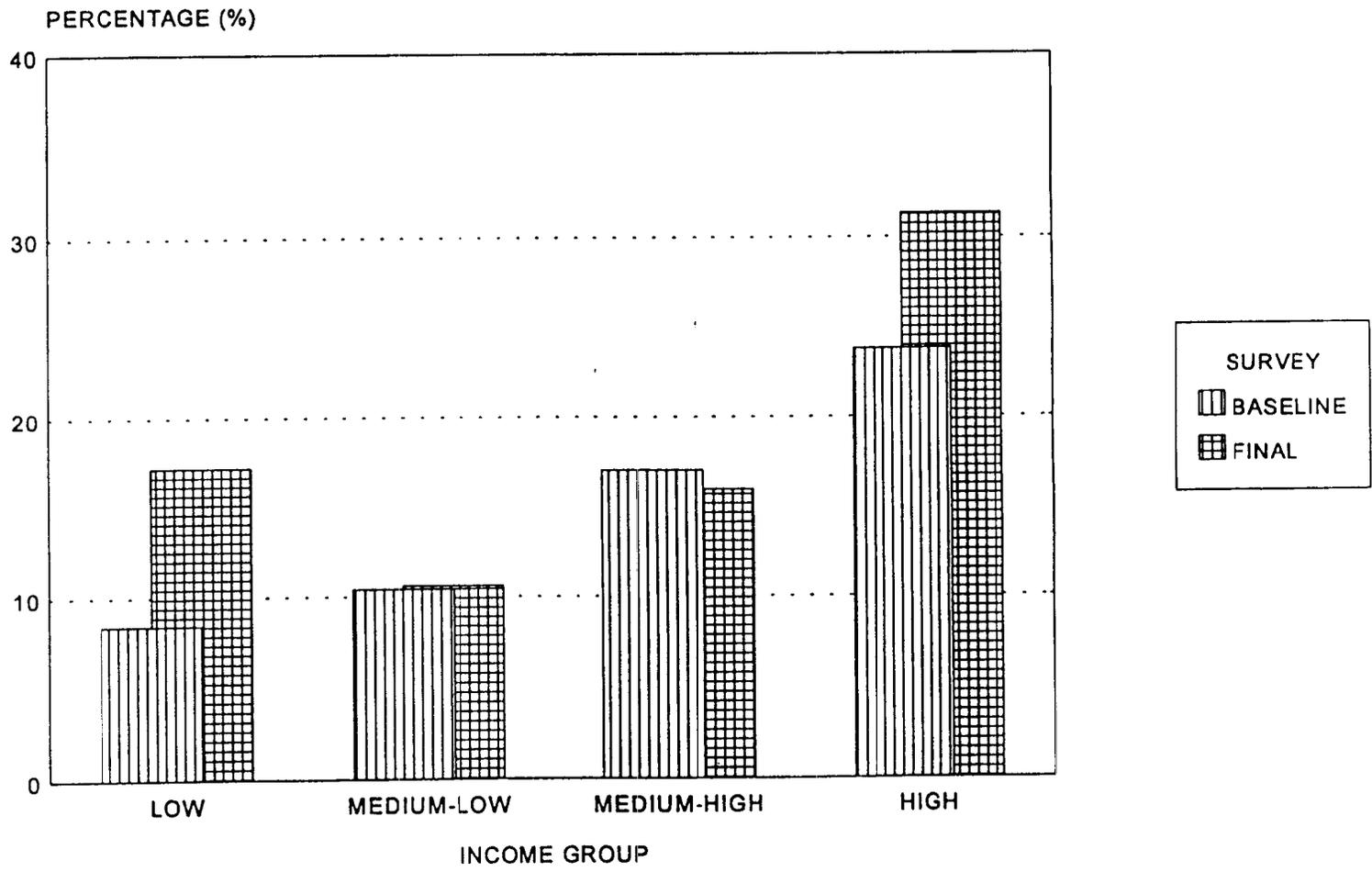
In this subsection, the quality of care provided at the public health facilities will be summarized in terms of the continuity of patient management, how the patients perceived the availability of medicines, and the practice of prescribing medicines.

Exhibit 6.2a shows the changes between the baseline and final surveys in the distribution of ill persons who visited a public health facility by the number of visits during the two weeks preceding the interview. The distribution of those who were ill by the number of visits was similar among the three districts before the pilot tests began. Between 48 and 53 percent of ill persons in the three districts made only one visit. The percentage of the ill who made at least three visits during the period before the tests was 26 percent in the Illéla control district, 33 percent in the Say test district, and 23 percent in the Boboye test district.

In the Illéla control district, the distribution of ill persons who visited a public health facility by the number of visits made during the two weeks preceding the interview was similar between the baseline and final surveys. On the other hand, in the Say test district, the percentage of those with an illness who only made one visit decreased from 48 percent on the baseline survey to 35 percent on the final survey. The percentage of persons who made at least three visits rose from 33 percent in the baseline survey to 42 percent in the final survey. In the Boboye test district, the percentage of those who made only one visit decreased from 53 percent on the baseline survey to 27 percent on the final survey. The percentage of those who made at least three visits increased from 23 percent on the baseline survey to 51 percent on the final survey.

In conclusion, there was no change in the continuity of care in the Illéla control district before and after the pilot tests were instituted. In the Boboye and Say test districts, the continuity of patient management at the public health facilities increased noticeably.

EXHIBIT 6.1g - BOBOYE DISTRICT
PERCENTAGE OF PERSONS WITH AN ILLNESS WHO VISITED A PUBLIC HEALTH FACILITY DURING THE TWO WEEKS
PRECEDING THE INTERVIEW: BY INCOME GROUP-- BASELINE AND FINAL SURVEYS



Graph 6.2a
DISTRIBUTION (%) OF PERSONS WITH AN ILLNESS WHO USED A PUBLIC HEALTH FACILITY, BY THE NUMBER OF VISITS: COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS

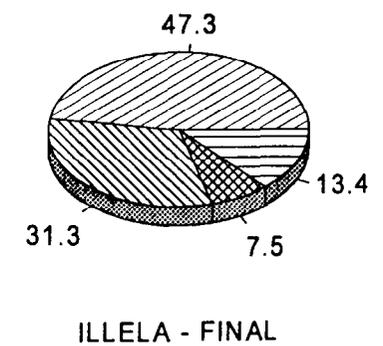
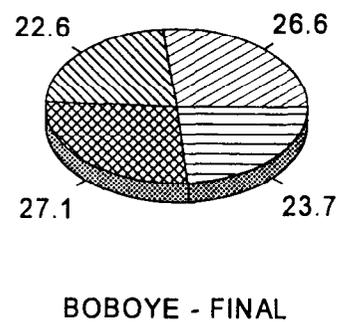
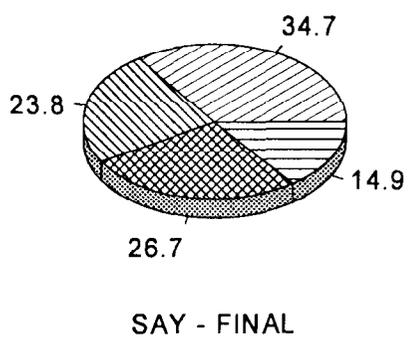
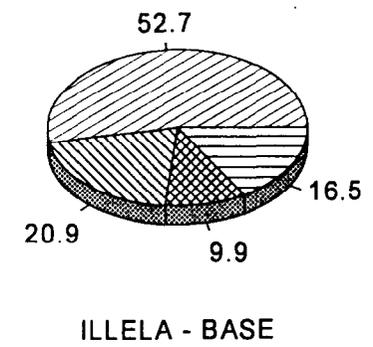
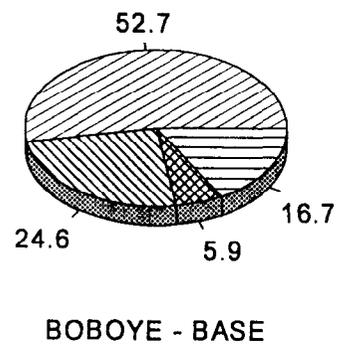
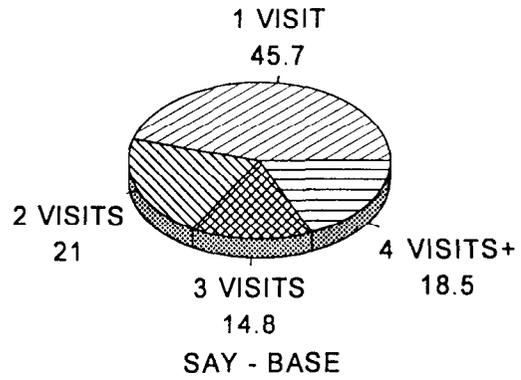


Exhibit 6.2b shows the changes between the baseline and final surveys in the perception of the availability of medicines at public health facilities among those who visited them. Before the tests began, 22 percent of the patients in the Illéla control district stated that medicines were seldom available, as opposed to 34 percent who stated that medicines were always available. In the Say test district before the tests began, these graphs were 33 percent and 24 percent, respectively. In the Boboye test district before the tests were introduced, these graphs were 38 percent and 11 percent, respectively. Thus, in the opinion of those who visited a public health facility before the pilot tests, medicines were more available at the public health facilities in the Illéla control district and, to a lesser extent, in the Say test district than in the Boboye test district.⁷

After the tests began, 27 percent of the patients in the Illéla control district stated that they were seldom available as opposed to 19 percent who stated that they were always available. A comparison of the responses between the baseline and final surveys suggests that from the patient's point of view, the availability of medicines had decreased at public health facilities of the Illéla control district.

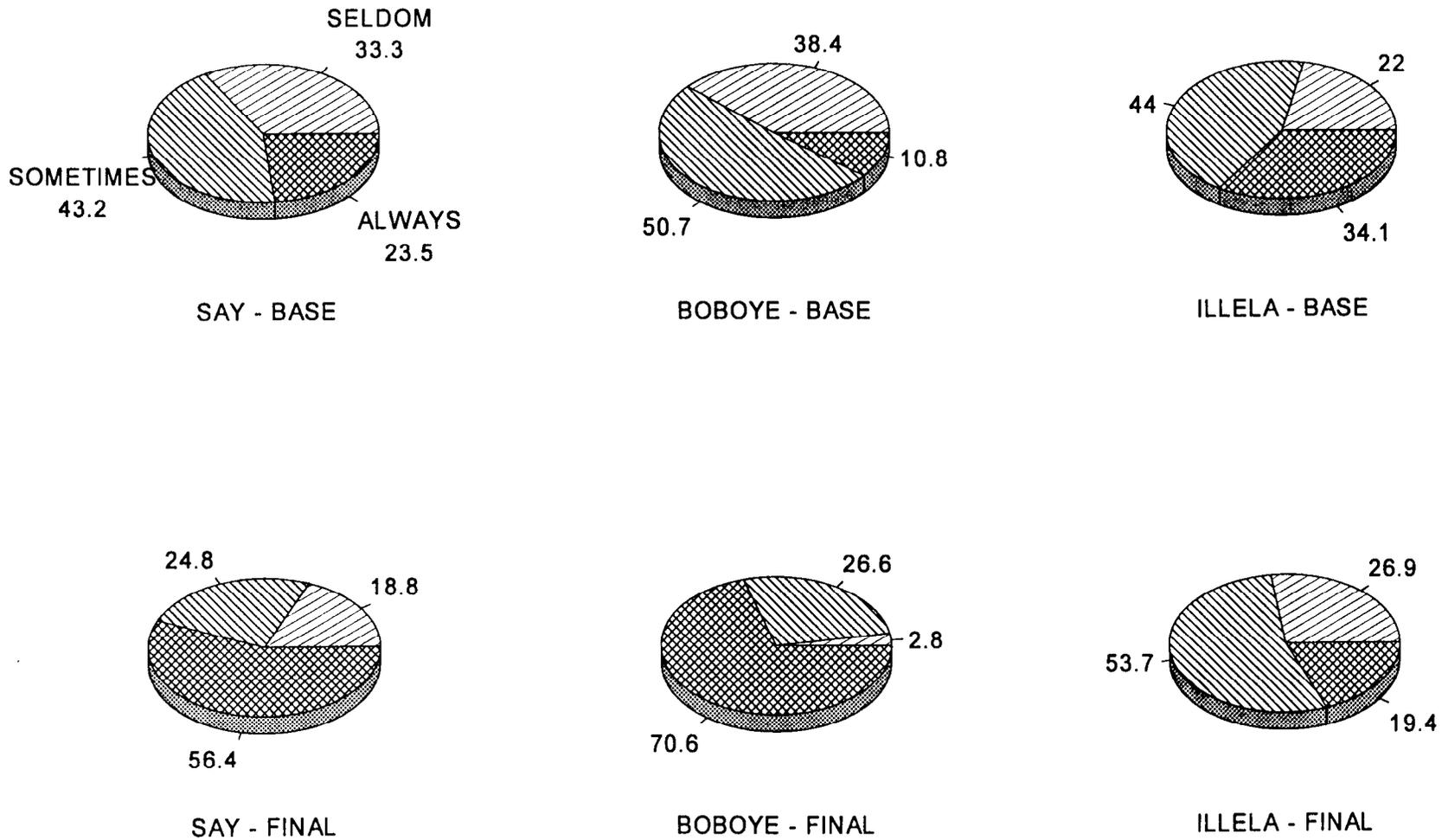
On the other hand, after the tests began in the Say test district, 19 percent of the patients stated that medicines were seldom available as opposed to 56 percent who stated that medicines were always available. That is, the percentage of patients at public health facilities who stated that medicines were always available doubled between the baseline and final surveys in the Say district. In the Boboye district, three percent of the patients stated that medicines were seldom available as opposed to 71 percent who stated that medicines were always available after the pilot tests began.

In conclusion, from the patient's point of view, the availability of medicines at public health facilities improved substantially during the pilot tests in the test districts, as compared to the control district of Illela. The availability of medicines improved significantly more at the public health facilities of the Boboye test district than at facilities in the Say district. This finding is consistent with the comparative performance of the public health facilities of the test districts regarding the management of medicines. The health care providers in the Boboye district, who were more proficient in the use of the diagnostic and treatment protocols, were able to minimize interruptions in the supply of medicines. This was not the case in the Say district, where the protocols were recently introduced.

⁷Before the pilot tests began, the perception of the patients regarding the availability of medicines was consistent with the actual 1992 central budget allocations for medicines to the public health facilities in the three respective districts. The country's six-month allocation for medicines in 1992 was about 250 CFA F per new client seeking treatment for an illness in the Illéla medical district, 94 CFA F in Say, and 57 CFA F in Boboye.

Graph 6.2b

DISTRIBUTION (%) OF PERSONS WITH AN ILLNESS WHO USED A PUBLIC HEALTH FACILITY, BY THEIR PERCEPTION OF THE AVAILABILITY OF MEDICINES: COMPARISON BETWEEN BASELINE AND FINAL SURVEYS



The availability of medicines at the public health facilities can be indirectly assessed by the extent to which the facilities gave patients prescriptions for medicines. *Exhibit 6.2c* shows the changes between the baseline and final surveys in the percentage of patients visiting public health facilities in the three districts who were given prescriptions for medicines. Before the pilot tests began, 63 percent of the patients at public health facilities in the Illéla control district had received a prescription. This graph was 52 percent for the Say test district and 68 percent for the Boboye test district.

After the tests were introduced, 49 percent of the patients in the Illéla district were given a prescription—a decrease of 22 percent between the baseline and final surveys. In the Say test district after the tests began, 29 percent of the patients were given a prescription—a decrease of 44 percent between the two surveys. In the Boboye test district, 25 percent of the patients were given a prescription after the tests began—a decrease of 63 percent between the two surveys.

In conclusion, the changes in the patient's perception of the availability of medicines at public health facilities are consistent with the changes in the percent of patients who were given prescriptions between the baseline and final surveys. Unlike the Illéla control district, care providers in the Boboye and Say test districts prescribed medicines less often once the tests were introduced. It is not surprising, then, that patient management and the continuity of care improved substantially in the Boboye and Say test districts compared to the Illéla control district.

C. 6.3 EXTENT OF PAYMENT

Payment for treatment at a public health facility includes payment for consultations, medicines, tests, and other services received at the facility. When the pilot tests were introduced in the Boboye and Say test districts, this type of payment was reduced for the most part to a lump sum payment per illness episode.

Exhibit 6.3 shows the changes between the baseline and final surveys in the proportion of patients who paid for treatment at public health facilities in the three districts. Before the pilot tests began, 34 percent of the patients at public health facilities in the Illéla control district stated that they had made some form of payment to ensure that they would be treated. This graph was 37 percent for the Say test district and only three percent in the Boboye test district.

After the pilot tests began, a large percentage of patients at public health facilities in the Illéla control district, where treatment was free of charge, continued to pay to ensure that they would be treated; 42 percent of the patients stated that they had made some form of payment for treatment.

As expected, with the introduction of cost recovery in the Boboye and Say test districts, the percentage of patients who made some form of payment for treatment increased sharply. In the Say test district, 78 percent of the patients stated that they had paid, as opposed to 71 percent in the Boboye test district. In the two test districts, the percentage of individuals who stated that they had made some form of payment was consistent with the data from the health facilities.

EXHIBIT 6.2c
PERCENTAGE OF PATIENTS VISITING A PUBLIC HEALTH FACILITY WHO WERE GIVEN A PRESCRIPTION:
COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS

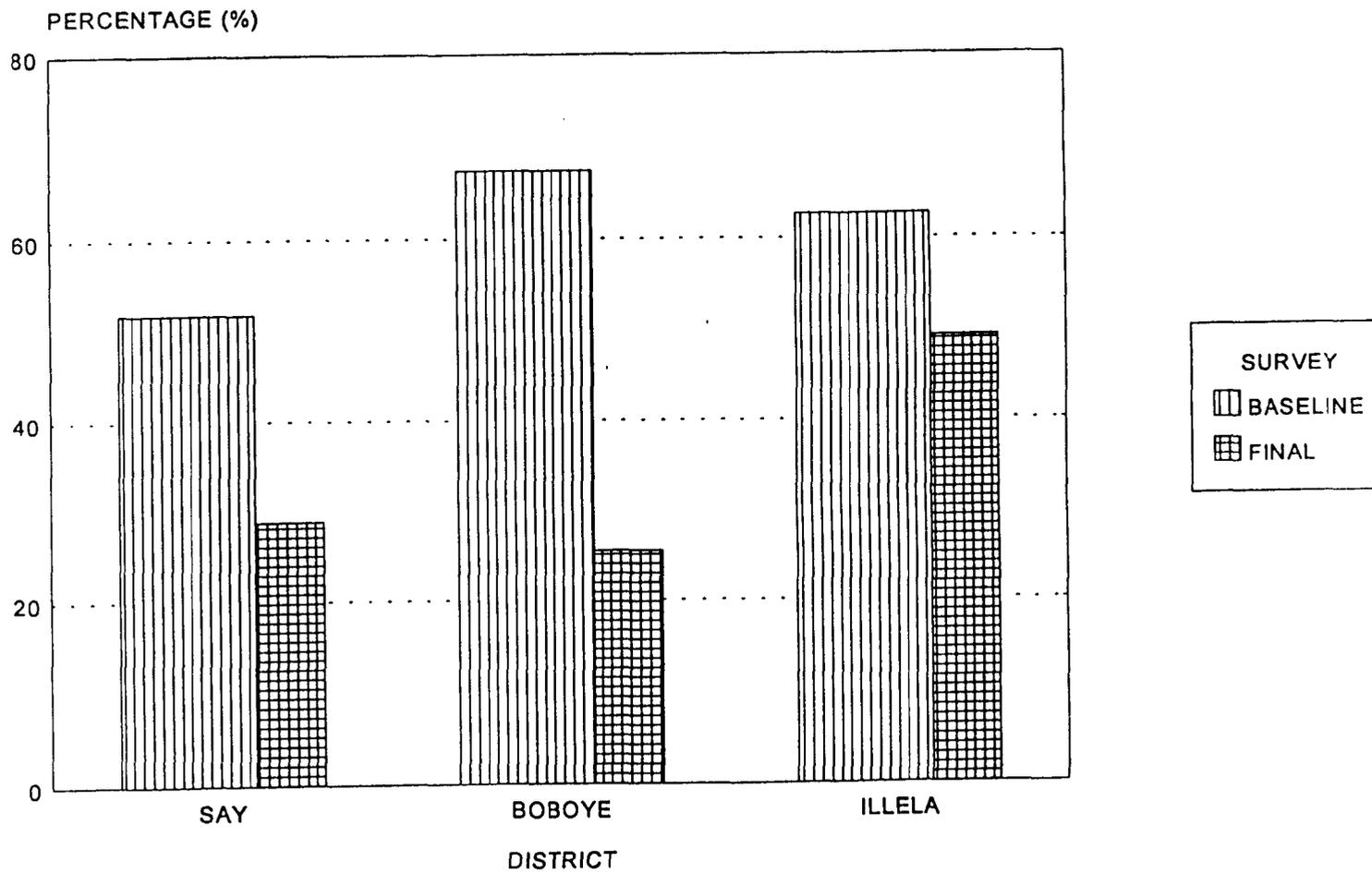
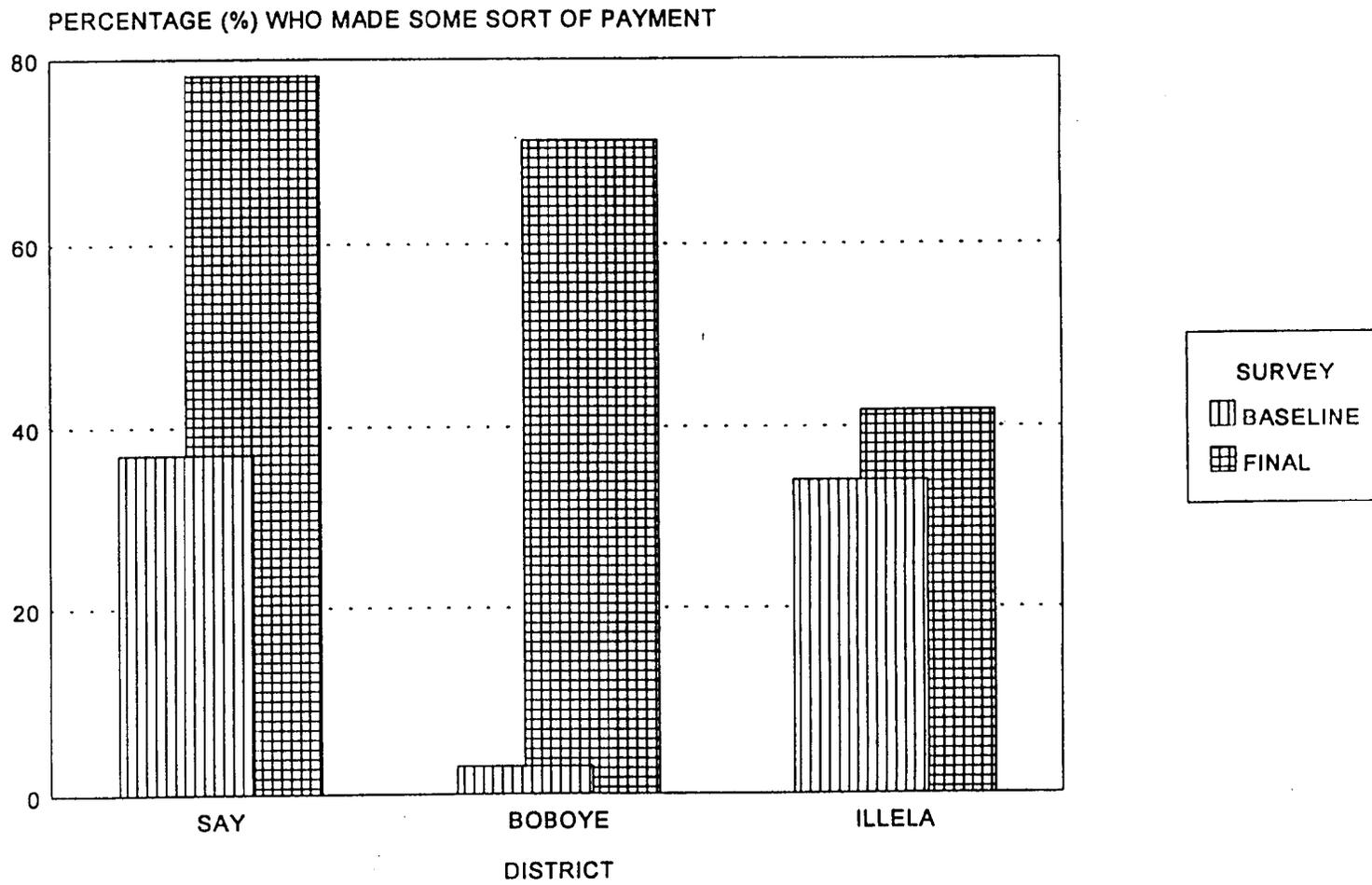


EXHIBIT 6.3
PROPORTION OF PATIENTS AT PUBLIC HEALTH FACILITIES WHO PAID FOR TREATMENT:
COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS



In conclusion, the data from the surveys indicate that patients at public health facilities were adhering to the payment system in the Boboye and Say test districts. The paradox of paying for health care under a system of free care continued in the Illéla control district. The data on illness-related expenses will enable the financial impact of payment to be assessed, and will show how this impact has changed between the base test years.

VII..0 7.0 ILLNESS-RELATED EXPENSES

During the two weeks preceding the interview, almost all ill persons who took measures to treat their illness either treated it at home or visited a public health facility. In fact, less than 2 percent of those who were ill in the three districts visited a health care provider other than a public health facility. Thus, during the two-week period, illness-related expenses involved either care at home or visits to the public health facilities.

The types of expenses related to care at home involved payment to the person(s) who cared for the sick person at home, if this was the case, and the purchase of medicines before visiting a public health facility. If care was sought outside the home, illness-related expenses at the first health facility chosen, involved transportation and lodging costs, fees for consultations and medicines, and charges for medical tests.

We shall first provide an overview of illness-related expenses during the two weeks preceding the interview for all persons surveyed who had an illness. We shall then examine the illness-related expenses incurred by patients at the public health facilities. Finally, we will summarize the impact of illness-related expenses on the households' monthly monetary expenses.

A. 7.1 AVERAGE ILLNESS-RELATED EXPENSES

Table 7.1a shows the illness-related expenses during the two weeks preceding the interview conducted for the final survey. In the Illéla control district, persons with an illness spent an average of 250 FCFA for treatment. In the Say test district, persons with an illness spent an average of 210 FCFA, and in the Boboye test district, they spent an average of 230 FCFA.

The most notable difference between the Illéla control district, and the two test districts concerns the types of illness-related expenses. In the Illéla control district, expenses related to the use of public health facilities accounted for 64 percent of the illness-related expenses. In contrast, expenses related to the use of public health facilities accounted for 28 percent of all illness-related expenses in the Say district and 31 percent in the Boboye district. In fact, in the two test districts, about 70 percent of illness-related expenses were for care at home, including the purchase of medicines before visiting a public health facility.

Table 7.1b shows the variation of illness-related expenses by the age and sex of those who were ill. As could be expected, illness-related expenses were higher among the very young and old. Households spent more to treat an ailing male household member than an ailing female. These disparities were larger in the Illéla and Boboye districts than in the Say district. In fact, in the Illéla and Boboye districts, the households spent more than twice as much to treat a male than a female. A breakdown by the age of the persons with an illness shows that in the three districts, households spent less to treat girls under age five and women age 15 and older than to treat males in the same age groups.

Exhibit 7.1a shows the changes in illness-related expenses between the baseline and final surveys. As can be seen from the graph, illness-related expenses in the three districts decreased between the two surveys. A large part of this decrease was related to the decrease in the three districts in the percentage of sick persons who bought medicines from a pharmacy before visiting a public health facility. The decrease in illness-related expenses in the Illéla control district was compounded by a decline in the use of the district's public health facilities for curative care.

The changes in illness-related expenses between the baseline and final surveys varied within the districts, however, according to distance from the public health facilities and the income level of those who were sick.

Exhibits 7.1b, 7.1c, and 7.1d show the changes in illness-related expenses in the Illéla control district, the Say district, and the Boboye district, respectively according to distance from the public health facilities. In the Illéla control district, the decrease in illness-related expenses was observed only among those who lived less than two hours by foot from a public health facility (*see Exhibit 7.1b*). This decrease in illness-related expenses is consistent with the relative decrease in activities within the formal health system at the local level, that is, at pharmaceutical depots and public health facilities.

In the Say test district, illness-related expenses decreased dramatically in the villages where expenses had exceeded 400 FCFA before the pilot tests began (*see Exhibit 7.1c*). Specifically, in the villages located less than an hour by foot from public health facilities, illness-related expenses dropped from an average of 480 FCFA before the pilot tests began to an average of 170 FCFA after the tests were introduced. The pilot tests began first in these villages.

In the Boboye test district, illness-related expenses decreased only in villages located less than two hours by foot from the public health facilities (*see Exhibit 7.1d*). Illness-related expenses among those who lived farther than two hours by foot from public health facilities remained the same between the baseline and final surveys.

Exhibits 7.1e, 7.1f, and 7.1g show the changes in illness-related expenses among the various income groups in the Illéla control district, the Say and the Boboye districts, respectively. In the Illéla district, the decrease in illness-related expenses affected all income groups equally (*see Exhibit 7.1e*). In the Say test district, a decrease in illness-related expenses was observed only among persons whose household was in the upper 50 percent income group (*see Exhibit 7.1f*). The changes in illness-related expenses were similar in the Boboye test district (*see Exhibit 7.1g*).

TABLE 7.1a
MONETARY ILLNESS-RELATED EXPENSES (CFA F): FOR ALL TYPES OF CARE
AVERAGE MONETARY EXPENSES OVER THE TWO WEEKS PRECEDING THE INTERVIEW, BY
TYPE OF EXPENSE AND BY DISTRICT
(AMONG THE PERSONS REPORTING AN ILLNESS)

	DISTRICT		
	SAY	BOBOYE	ILLELA
Expenses for Care at Home	153	159	88
Amount Spent on Medicines	116	143	76
Expenses at the First Health Facility Chosen	60	72	158
Other Expenses	-	-	2
Total Illness-Related Expenses	214	232	249
Number of Respondents	847	936	927

TABLE 7.1b
MONETARY EXPENSES RELATED TO ILLNESS (CFA F): ALL TYPES OF CARE
AVERAGE MONETARY EXPENSES RELATED TO ILLNESS OVER THE TWO WEEKS PRECEDING THE INTERVIEW,
BY SEVERAL SOCIO-DEMOGRAPHIC CHARACTERISTICS AND BY DISTRICT
(AMONG THE PERSONS REPORTING AN ILLNESS)

	DISTRICT					
	SAY		BOBOYE		ILLELA	
	Illness-Related Expenses (CFA F)	Number of Respondents	Illness-Related Expenses (CFA F)	Number of Respondents	Illness-Related Expenses (CFA F)	Number of Respondents
Age in Years						
0-4	172	244	205	223	208	248
5-14	122	232	131	251	109	191
15-44	327	219	208	283	211	320
45 +	257	152	443	179	539	168
Sex						
Male	254	429	319	429	354	440
Female	172	418	158	507	153	487
Strata						
With Pub. Health Fac.	265	116	242	149	366	132
Without Pub. Health Fac.	205	731	230	787	229	795
Total	214	847	232	936	249	927

EXHIBIT 7.1a

AVERAGE MONETARY EXPENSES RELATED TO ILLNESS OVER THE TWO WEEKS PRECEDING THE INTERVIEW:
COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS (AMONG THE PERSONS REPORTING AN ILLNESS)

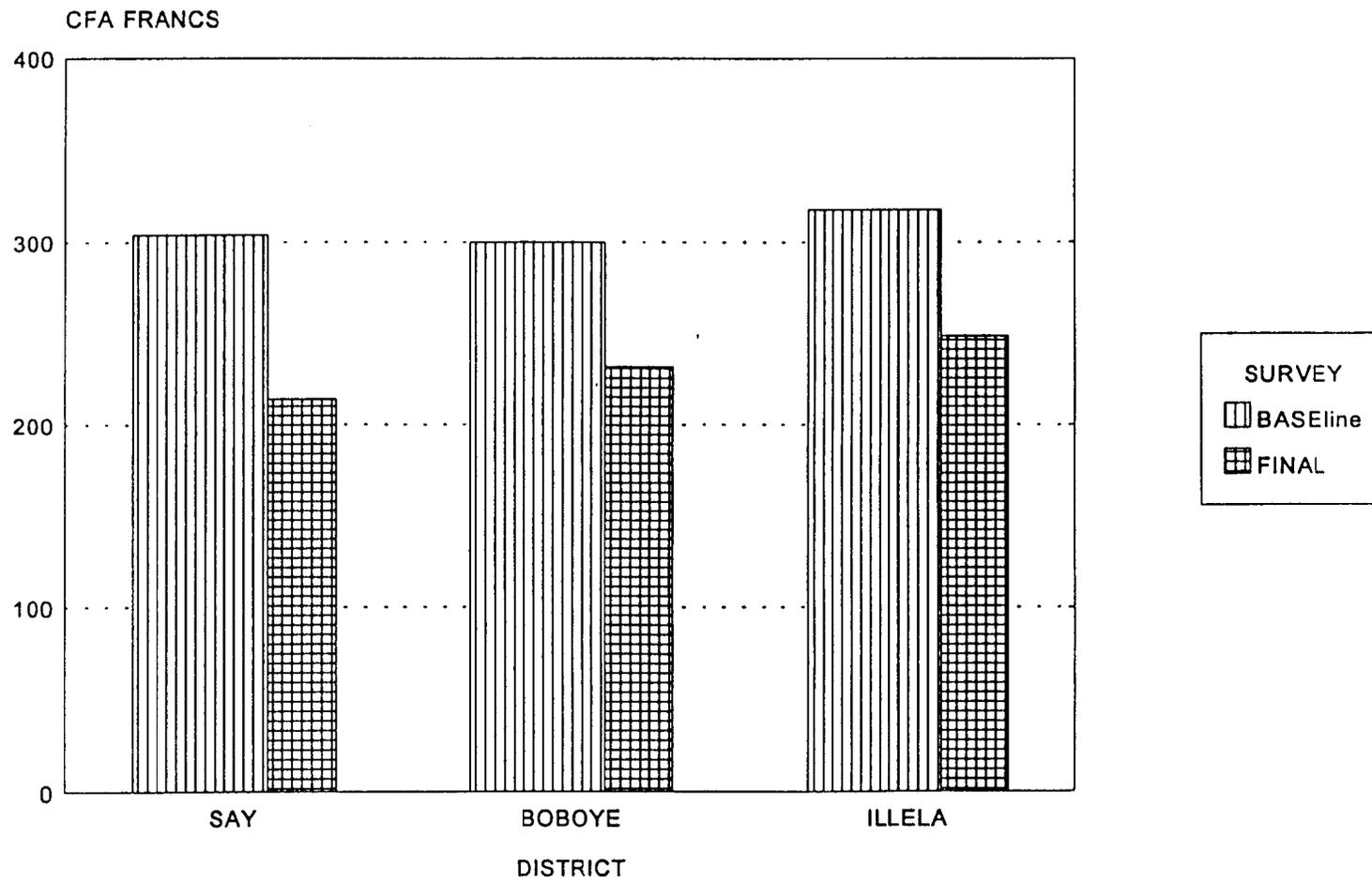


EXHIBIT 7.1b - ILLELA DISTRICT
AVERAGE MONETARY EXPENSES RELATED TO ILLNESS OVER THE TWO WEEKS PRECEDING THE INTERVIEW: BY THE TIME
BY FOOT REQUIRED TO REACH THE NEAREST PUBLIC HEALTH FACILITY (AMONG PERSONS REPORTING AN ILLNESS)

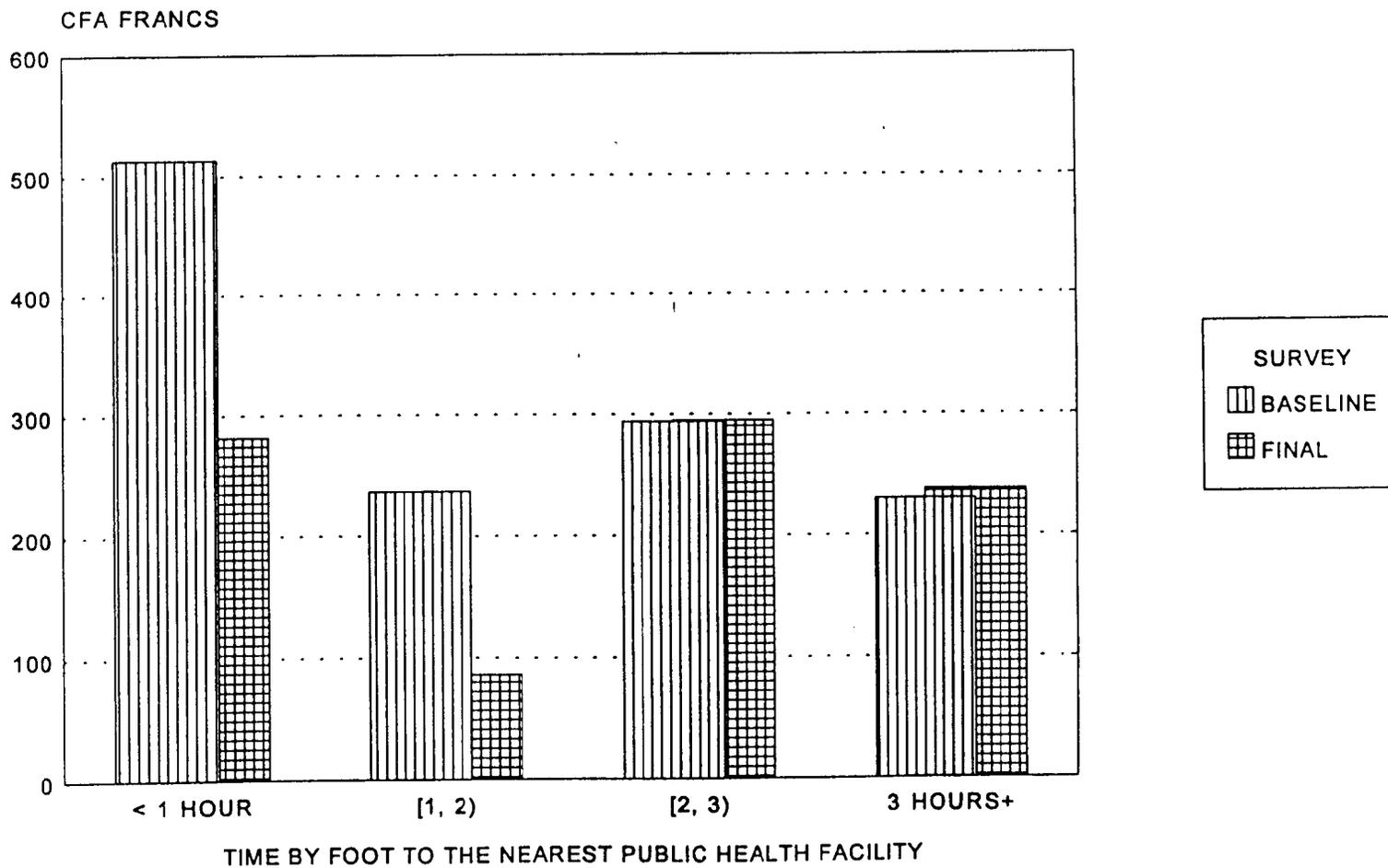


EXHIBIT 7.1c - SAY DISTRICT

AVERAGE MONETARY EXPENSES RELATED TO ILLNESS OVER THE TWO WEEKS PRECEDING THE INTERVIEW: BY THE TIME BY FOOT REQUIRED TO REACH THE NEAREST PUBLIC HEALTH FACILITY (AMONG PERSONS REPORTING AN ILLNESS)

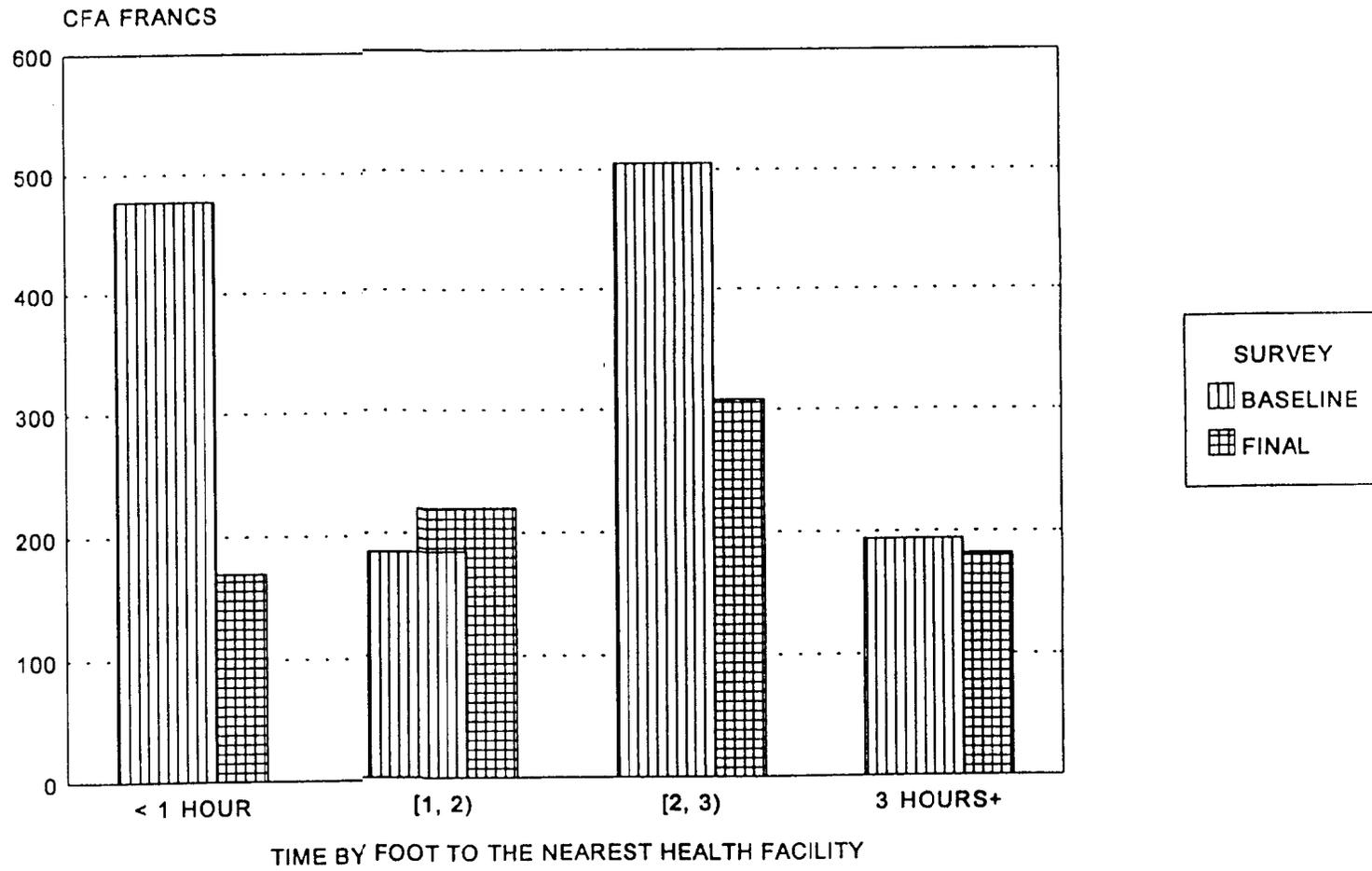


EXHIBIT 7.1d - BOBOYE DISTRICT
AVERAGE MONETARY EXPENSES RELATED TO ILLNESS OVER THE TWO WEEKS PRECEDING THE INTERVIEW: BY THE TIME
BY FOOT REQUIRED TO REACH THE NEAREST PUBLIC HEALTH FACILITY (AMONG PERSONS REPORTING AN ILLNESS)

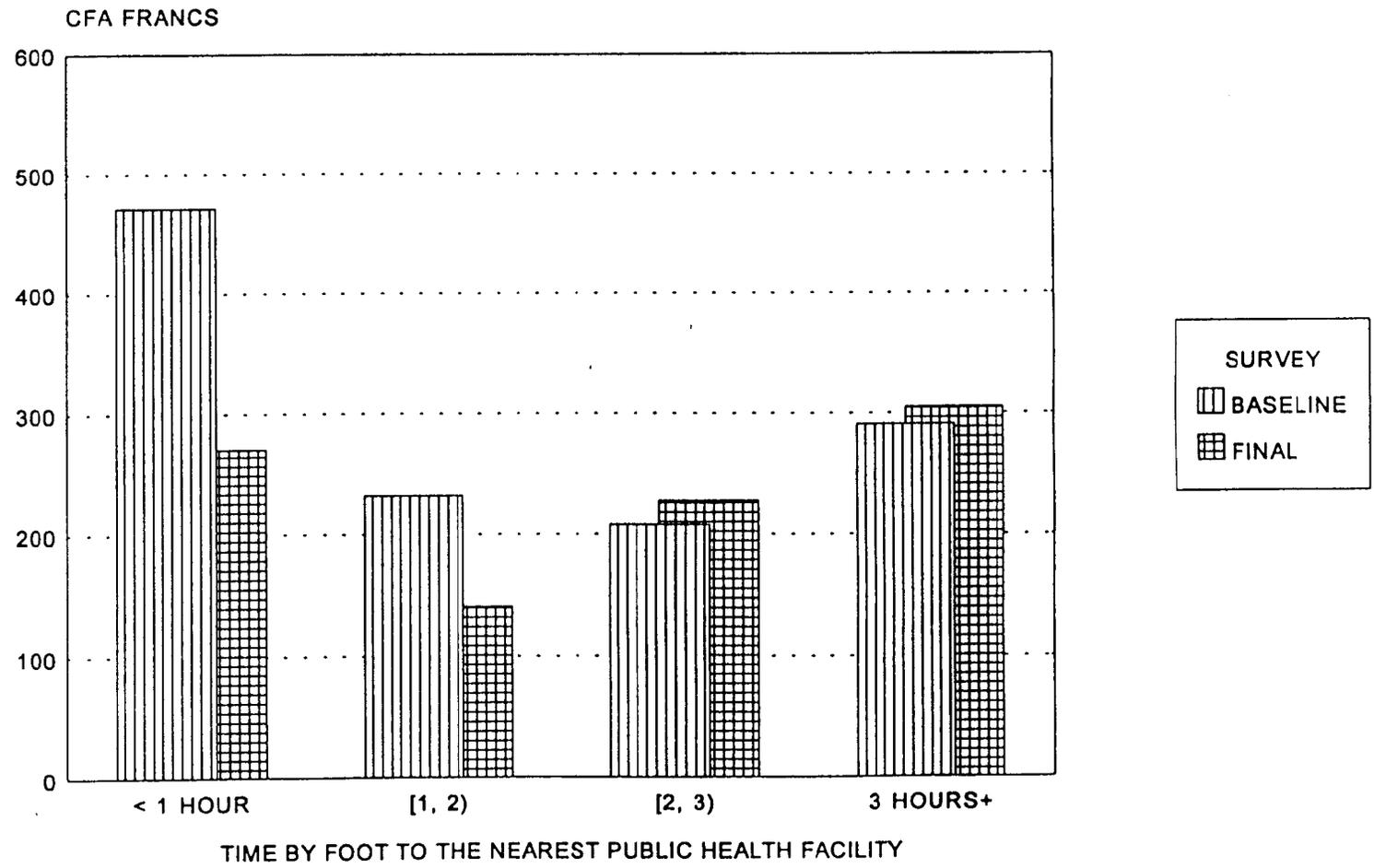


EXHIBIT 7.1e - ILLELA DISTRICT
AVERAGE MONETARY EXPENSES RELATED TO ILLNESS OVER THE TWO WEEKS PRECEDING THE INTERVIEW: BY INCOME GROUP--COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS (AMONG PERSONS REPORTING AN ILLNESS)

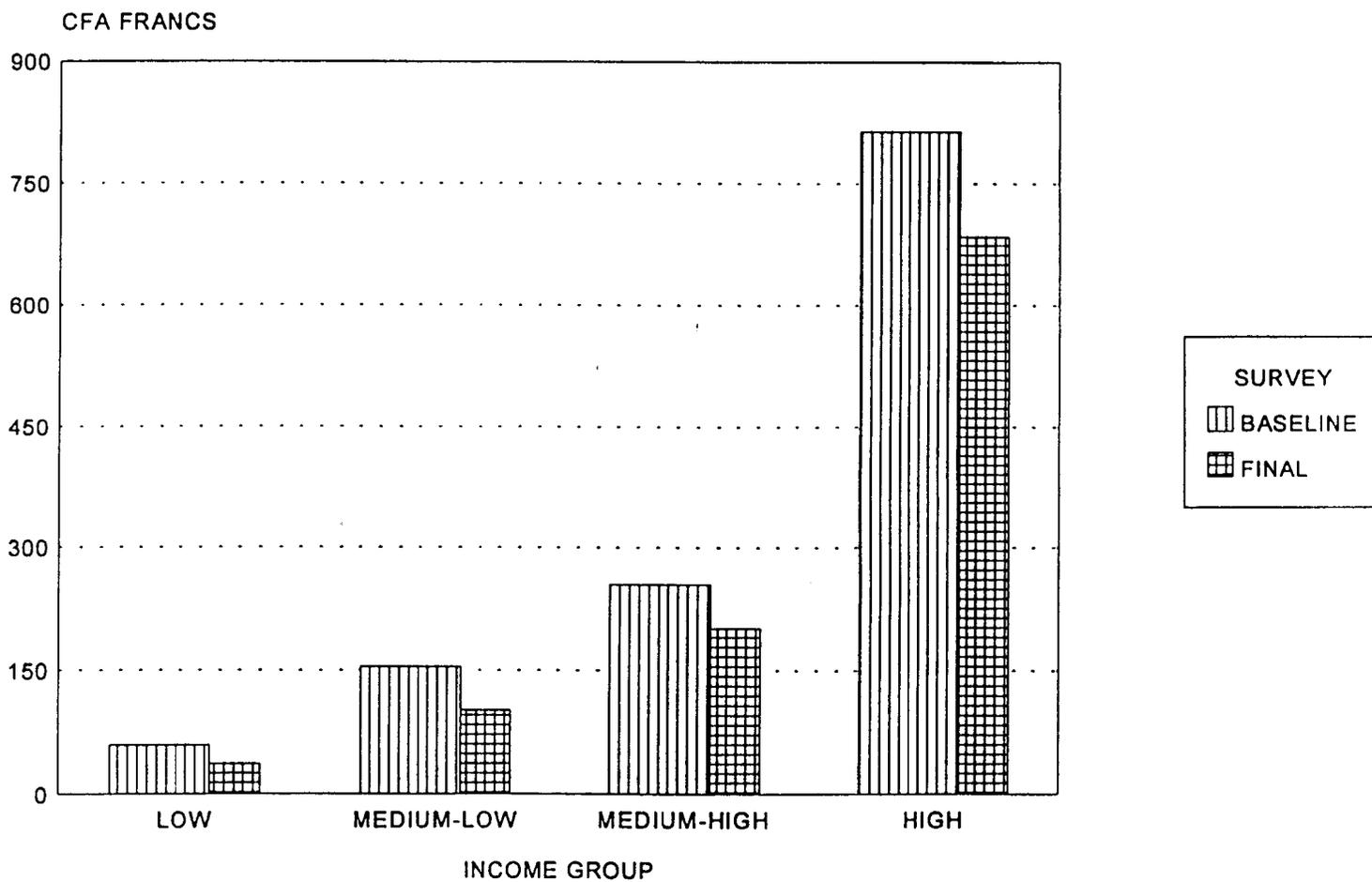


EXHIBIT 7.1f - SAY DISTRICT
AVERAGE MONETARY EXPENSES RELATED TO ILLNESS OVER THE TWO WEEKS PRECEDING THE INTERVIEW: BY INCOME GROUP--COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS (AMONG PERSONS REPORTING AN ILLNESS)

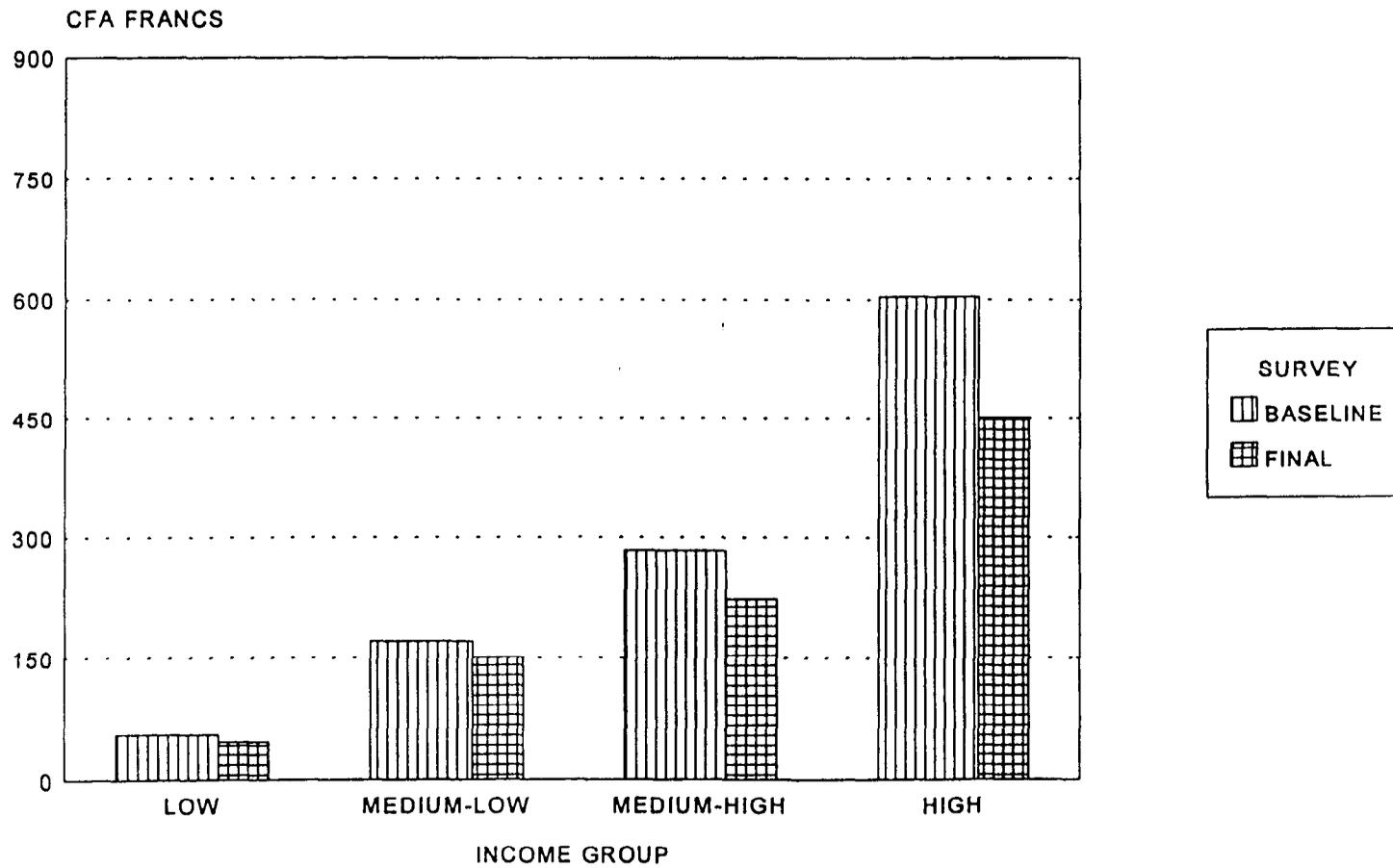
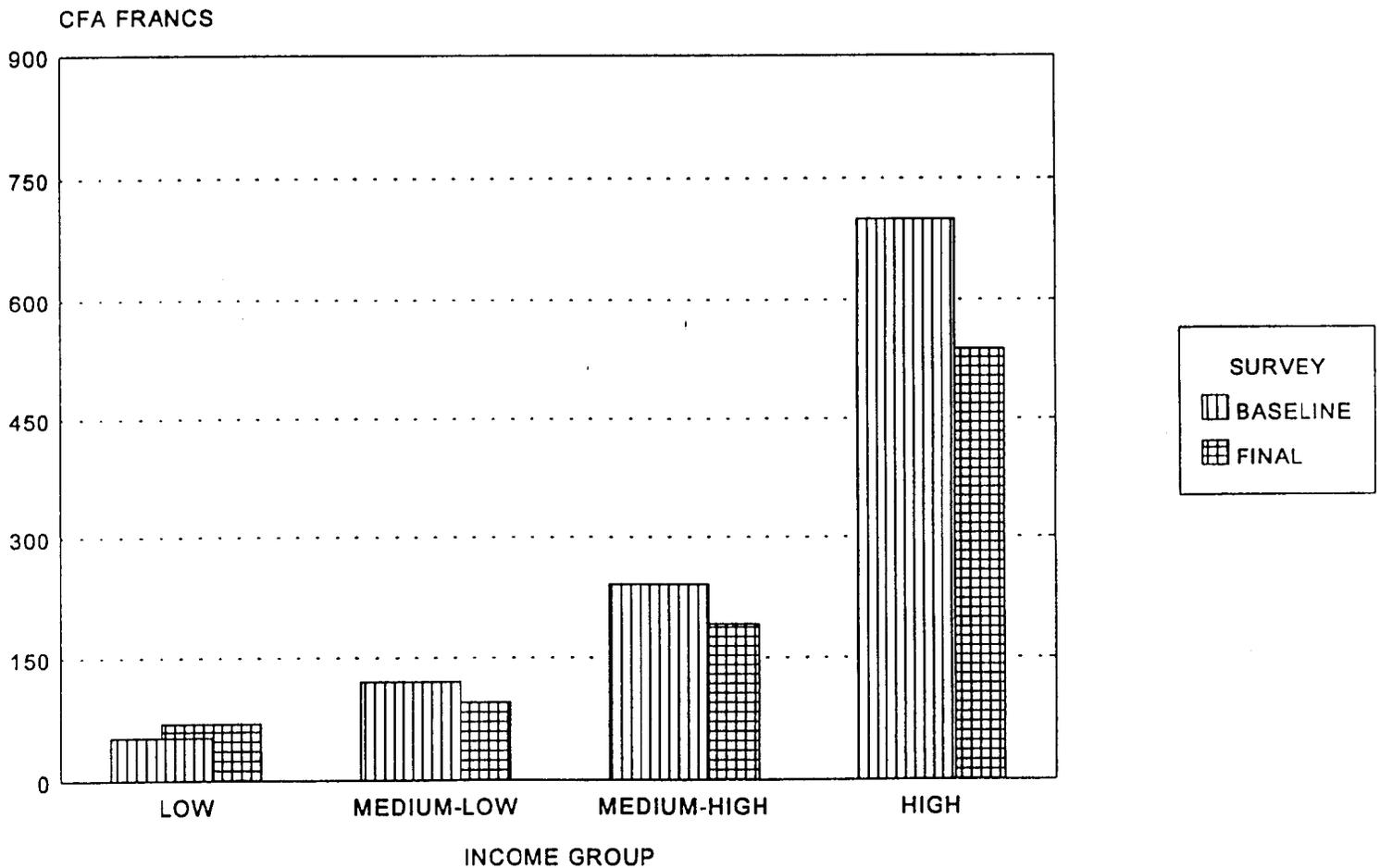


EXHIBIT 7.1g - BOBOYE DISTRICT
AVERAGE MONETARY EXPENSES RELATED TO ILLNESS OVER THE TWO WEEKS PRECEDING THE INTERVIEW: BY INCOME GROUP--COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS (AMONG PERSONS REPORTING AN ILLNESS)



B. 7.2 EXPENSES INCURRED BY PATIENTS AT PUBLIC HEALTH FACILITIES

Variation Among the Districts

In this subsection, we shall describe in greater detail the expenses incurred during the two weeks preceding the interview by patients at public health facilities. *Exhibit 7.2a* shows the changes between the baseline and final surveys in the expenses incurred by patients at the facilities.

In the Illéla control district, the expenses incurred by patients at public health facilities remained at almost the same level during the baseline and final surveys. In fact, during the two weeks preceding the interview, expenses reached 1,700 FCFA on the baseline survey and 1,800 FCFA on the final survey. In the Say test district, the expenses incurred by patients at the public health facilities during the two weeks preceding the interview decreased from 1,040 FCFA on the baseline survey to 610 FCFA on the final survey—a decrease of 41 percent. In the Boboye test district, the expenses incurred by patients decreased from 1,030 FCFA on the baseline survey to 540 FCFA in the final survey—a decrease of 48 percent.

Exhibits 7.2b and *7.2c* show the amounts of individual expenses incurred by the patients at public health facilities in the three districts during the baseline and final surveys respectively.

Before the tests began, patients at public health facilities spent large sums of money for care at home, that is, before visiting a health facility. In the Illéla control district, these expenses averaged 770 FCFA. In the final survey, the expenses incurred by patients of public health facilities for care at home decreased dramatically in the Illéla control district. Most ill people who bought medicines before visiting a health facility purchased them in the informal market, where costs were relatively low, in contrast to the baseline survey, where purchases from pharmacies had been relatively common.

Expenses for transportation, lodging, and treatment for care at public health facilities of the Illéla control district increased sharply. These costs rose from 830 FCFA in the baseline survey to 1,600 FCFA in the final survey—an increase of 93 percent. Expenses for treatment increased by 83 percent. The increase in the average expenses for transportation, lodging, and treatment at public health facilities in the Illéla control district were partly related to the decrease in the use of the facilities, which meant that patients with more serious illnesses used the facilities.

In the Say test district, the expenses incurred by patients at public health facilities for care at home averaged 330 FCFA before the tests began. These expenses amounted to 300 FCFA after the tests began. This means that the patients at public health facilities in the Say test district continued to resort to care at home before visiting a health facility. It is mainly expenses for treatment at health facilities that decreased. In fact, expenses for treatment decreased from 480 FCFA on the baseline survey to 171 FCFA on the final survey—a decrease of 64 percent.

In the Boboye test district, patients at public health facilities incurred expenses for care at home averaging 640 FCFA before the tests were introduced. These expenses were mainly for purchasing medicines from pharmaceutical depots and the informal market. After the tests began, expenses for care at home fell to an average of 273 FCFA—a decrease of 57 percent. Expenses related to the use of public health facilities remained at the relatively low level observed before the tests began. In the Boboye test district, expenses for care at the health facilities mainly consisted of transportation, food, and lodging costs for the patients and those accompanying them.

Exhibits 7.2b and 7.2c show the extent to which expenses incurred in seeking care from other health care providers after visiting the first public health facility were eliminated in the Boboye and Say test districts. Such expenses, which were common in the three districts before the tests began, continued in the Illéla control district after the tests were instituted.

In conclusion, the expenses incurred by patients at public health facilities in the Illéla control district remained at the same high level in the final survey as in the baseline survey. The expenses incurred by patients at public health facilities decreased by 41 percent for the Say test district and 48 percent for the Boboye test district. Below, we shall describe the changes in these expenses in relation to the respondents' distance from the public health facilities and their income level.

1. 7.2.2 Variation by Distance from Health Facilities

Exhibit 7.2d, 7.2e, and 7.2f show the expenses incurred by patients at public health facilities by their distance from the facilities for the Illéla control district, Say test district, and Boboye test district respectively.

In the Illéla control district, expenses by patients who lived less than two hours by foot from a public health facility decreased from 1,350 FCFA before the tests to 950 FCFA after the tests—a decrease of 30 percent. This decrease was mainly related to lower expenses for care at home. In fact, the average expenses for treatment at health facilities increased 83 percent between the baseline and final surveys.

Furthermore, illness-related expenses among patients who lived farther than two hours by foot from a public health facility in the Illéla control district increased from 3,020 FCFA on the baseline survey to 4,120 FCFA on the final survey—an increase of 36 percent. This increase was related to increased expenses for care at the public health facilities, which rose 80 percent between the baseline and final surveys for this group of patients.

In the Say district, the expenses incurred by patients who lived less than two hours by foot from a public health facility decreased from 840 FCFA before the tests to 480 FCFA after the tests—a decrease of 43 percent. In fact, illness-related expenses for care at public health facilities among this group of patients decreased 53 percent between the baseline and final surveys.

EXHIBIT 7.2a

AVERAGE MONETARY EXPENSES RELATED TO ILLNESS OVER THE TWO WEEKS PRECEDING THE INTERVIEW: COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS (AMONG PERSONS WITH AN ILLNESS WHO USED A PUBLIC HEALTH FACTY

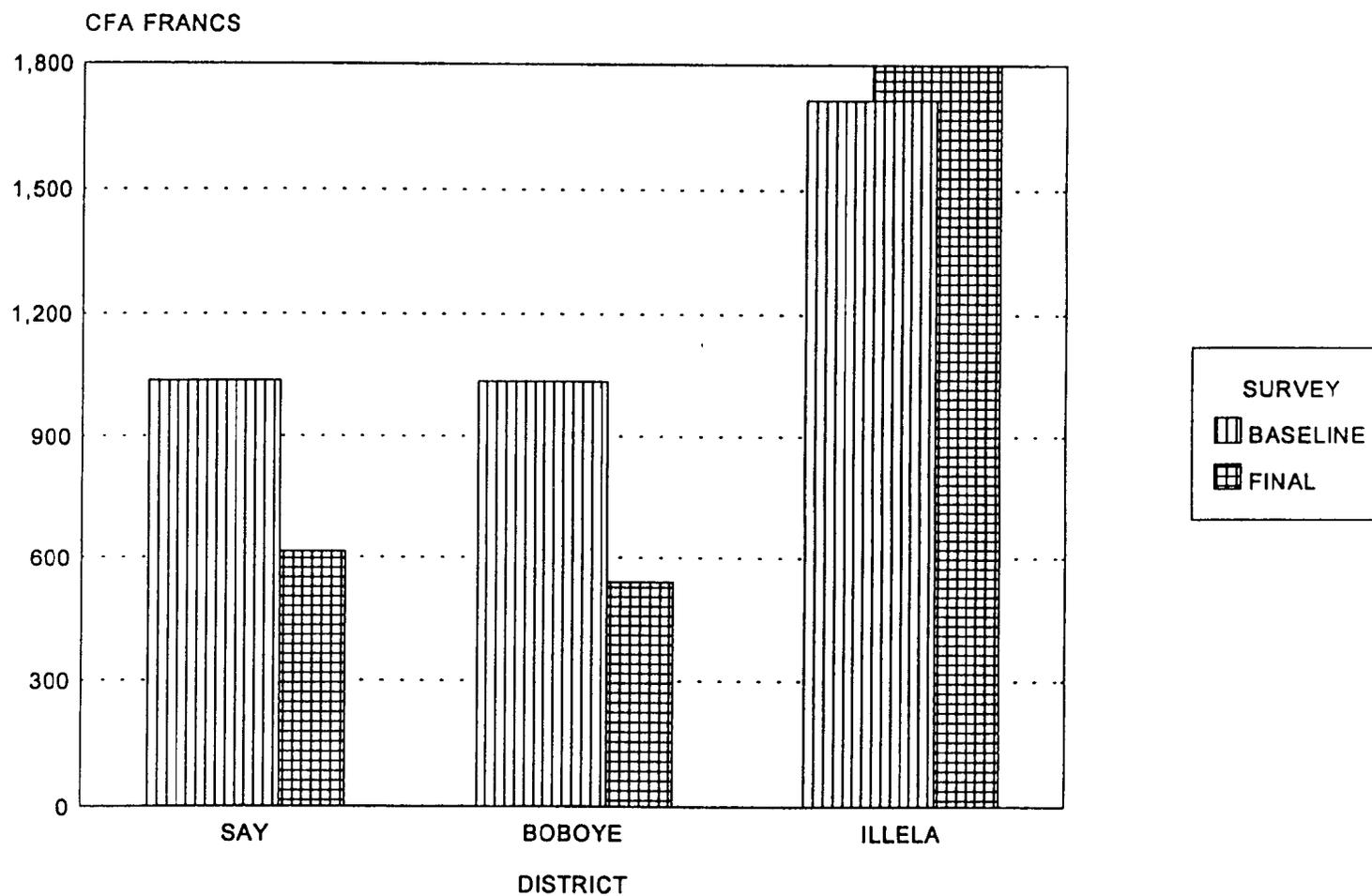


EXHIBIT 7.2b
ILLNESS-RELATED EXPENSES AMONG PERSONS WITH AN ILLNESS WHO USED A PUBLIC HEALTH FACILITY
DURING THE TWO WEEKS PRECEDING THE INTERVIEW: BASELINE SURVEY

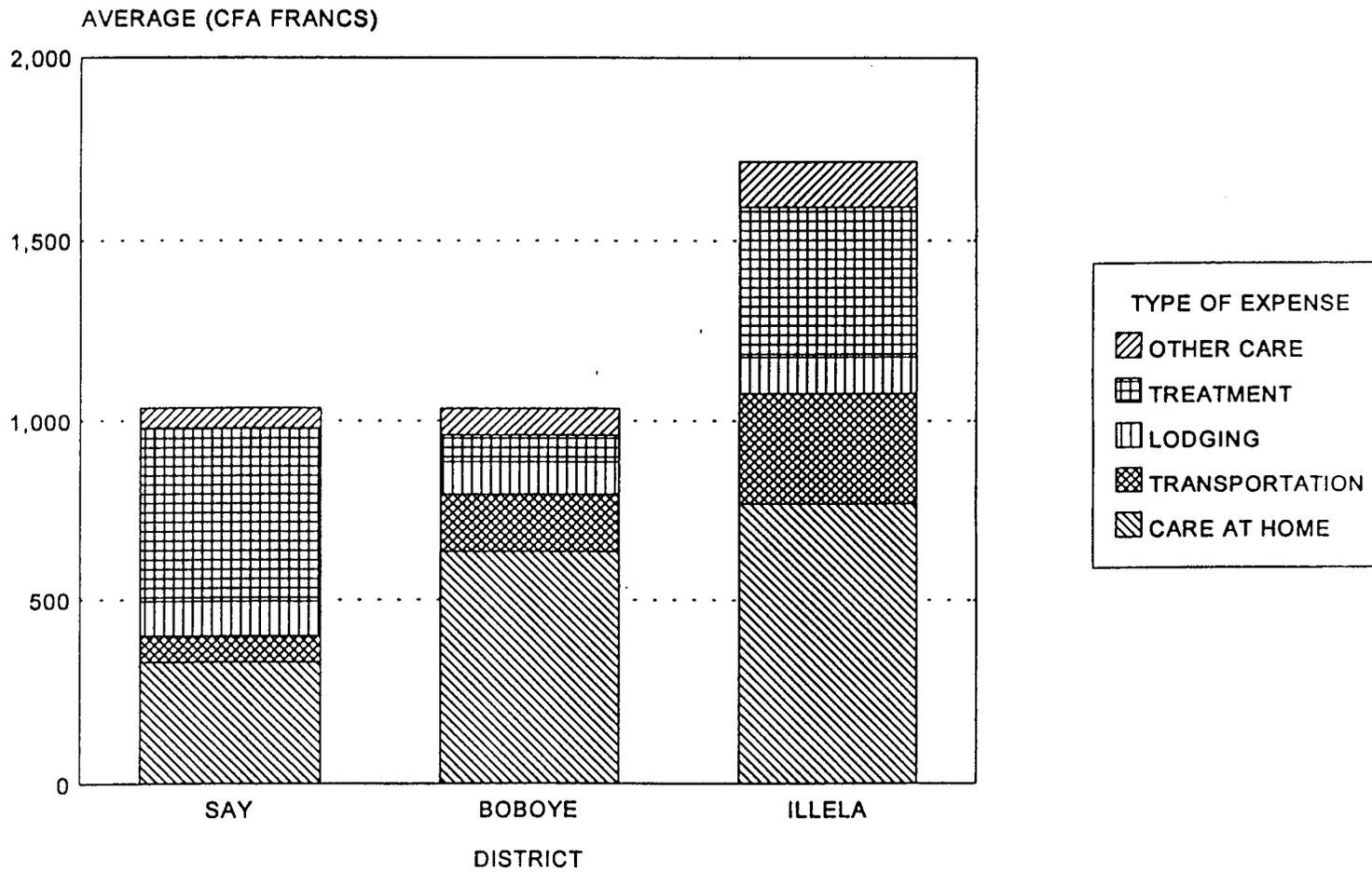


EXHIBIT 7.2c
ILLNESS-RELATED EXPENSES AMONG PERSONS WITH AN ILLNESS WHO USED A PUBLIC HEALTH FACILITY
DURING THE TWO WEEKS PRECEDING THE INTERVIEW: FINAL SURVEY

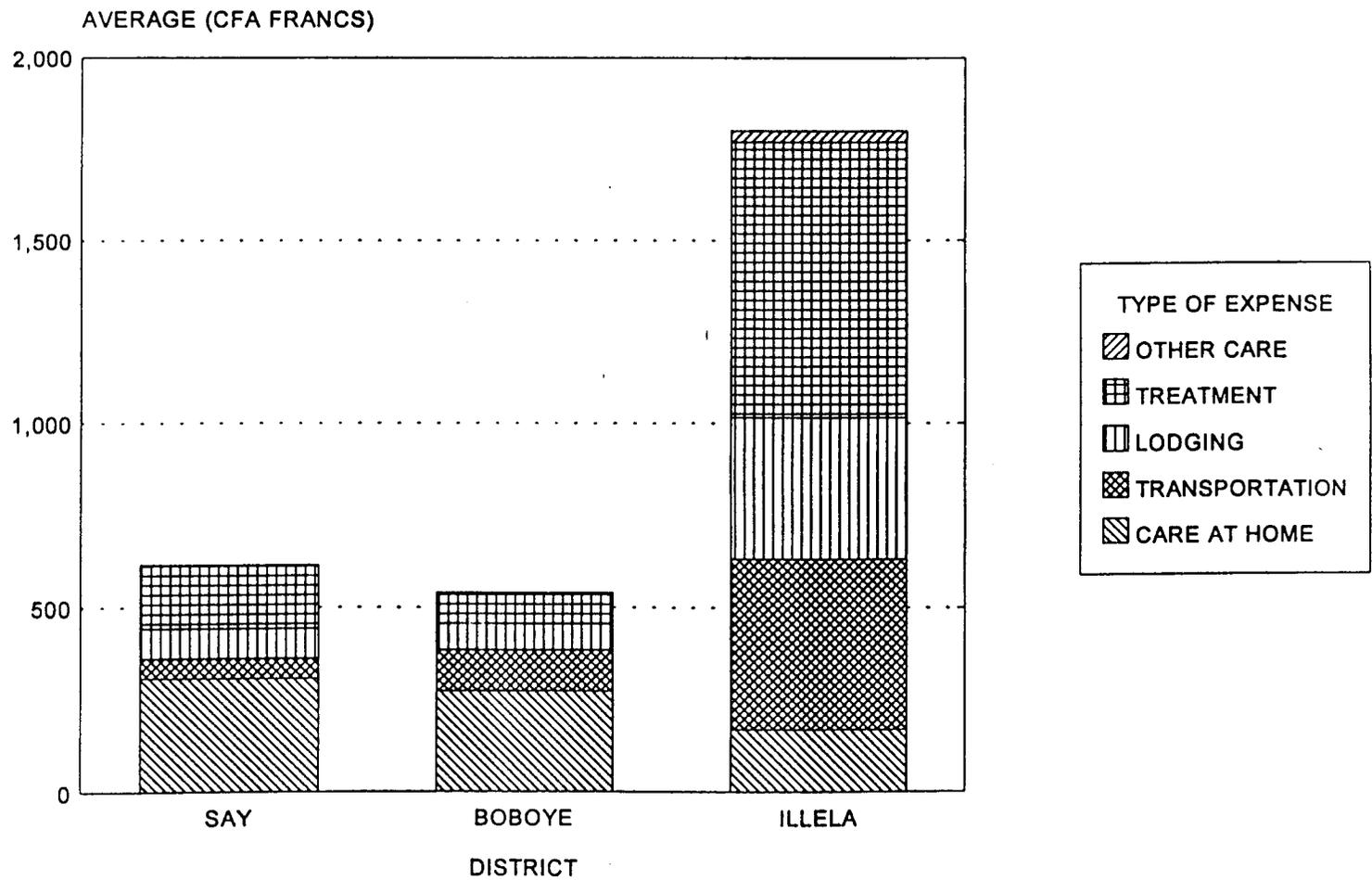


EXHIBIT 7.2d - ILLELA DISTRICT
 ILLNESS-RELATED EXPENSES AMONG THE PERSONS WITH AN ILLNESS WHO USED A PUBLIC HEALTH FACILITY DURING
 THE TWO WEEKS PRECEDING THE INTERVIEW: BY THE TIME BY FOOT REQUIRED TO REACH THE FACILITY

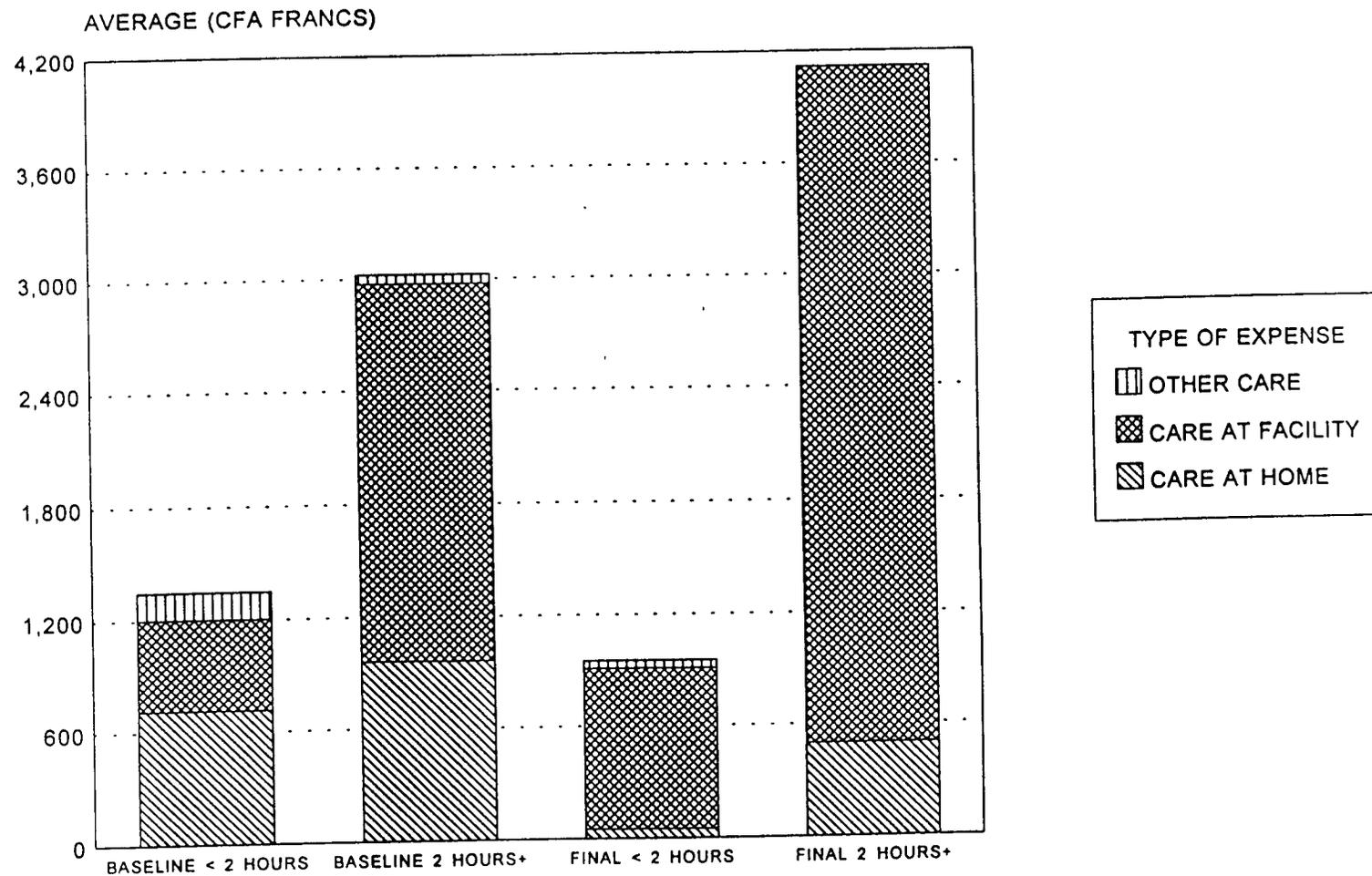


EXHIBIT 7.2e - SAY DISTRICT
ILLNESS-RELATED EXPENSES AMONG THE PERSONS WITH AN ILLNESS WHO USED A PUBLIC HEALTH FACILITY
DURING THE TWO WEEKS PRECEDING THE INTERVIEW: BY THE TIME BY FOOT REQUIRED TO REACH THE FACILITY

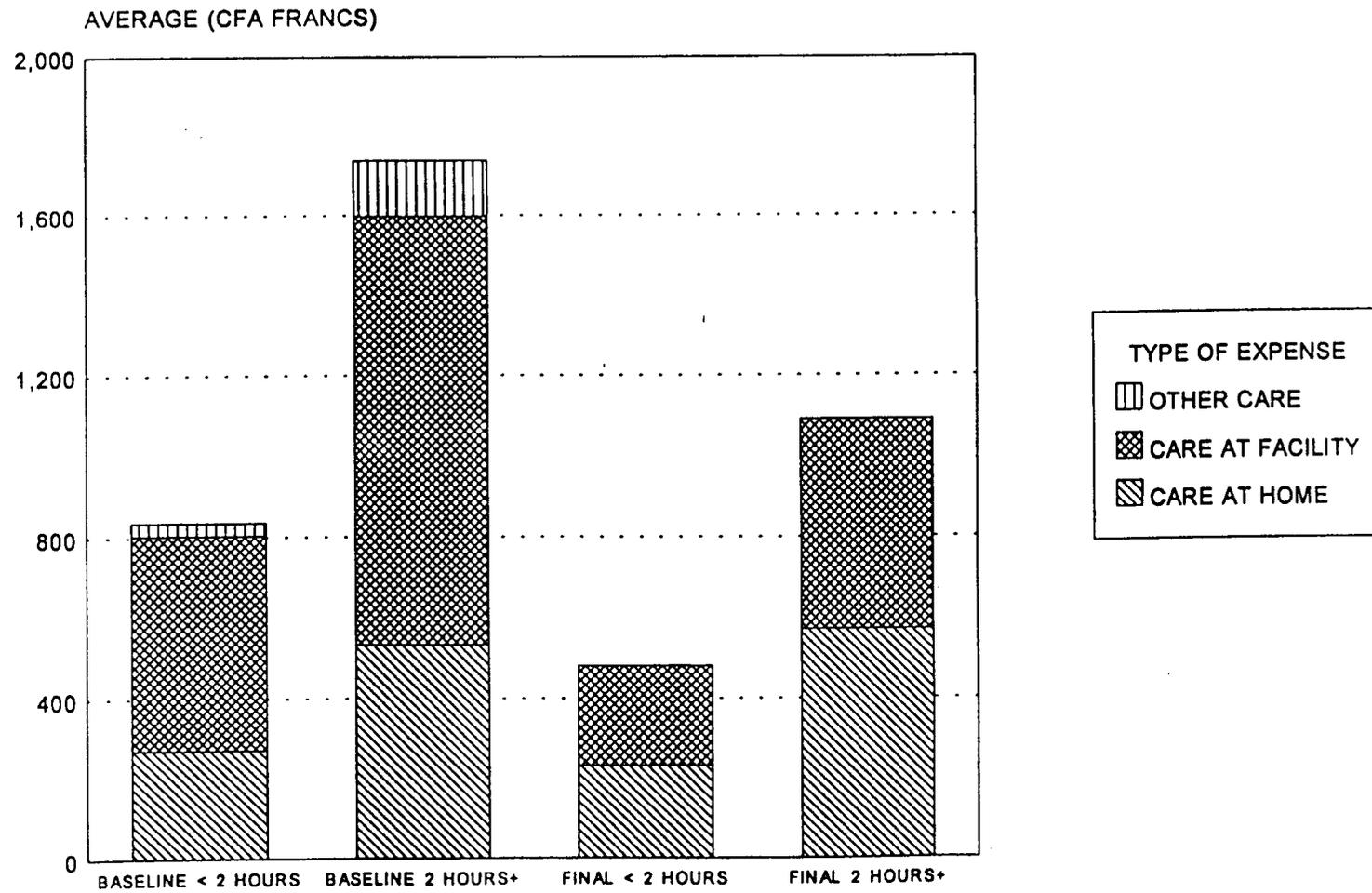
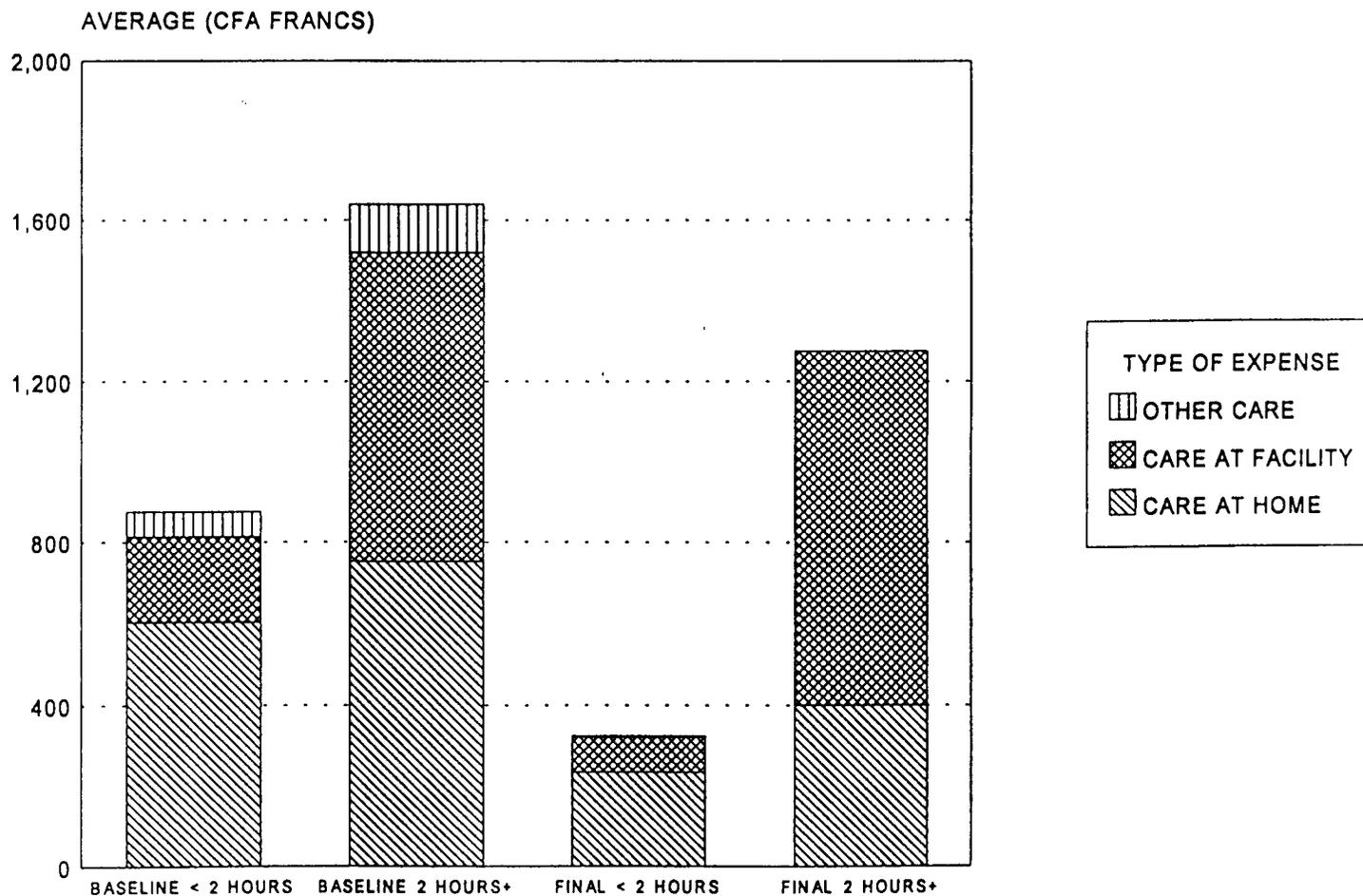


EXHIBIT 7.2f - BOBOYE DISTRICT
 ILLNESS-RELATED EXPENSES AMONG THE PERSONS WITH AN ILLNESS WHO USED A PUBLIC HEALTH FACILITY DURING
 THE TWO WEEKS PRECEDING THE INTERVIEW: BY THE TIME BY FOOT REQUIRED TO REACH THE FACILITY



Among those patients in the Say test district who lived more than two hours by foot from a public health facility, illness-related expenses decreased from 1,740 FCFA in the baseline survey to 1,090 FCFA in the final survey. This represents a decrease of 37 percent. The expenses for care at home remained similar between the two surveys. The decrease in illness-related expenses was due to decreased expenses for care at the public health facilities, which fell 51 percent.

In the Boboye test district, the expenses of patients who lived less than two hours from a public health facility decreased from 880 CFA before the tests to 330 FCFA after the tests—a decrease of 63 percent. This decrease was mainly due to lower expenses for medicines used for care at home. In addition, the expenses of patients who lived more than two hours by foot from a facility decreased from 1,640 FCFA on the baseline survey to 1,280 FCFA on the final survey. This represents a decrease of 22 percent.

In conclusion, the expenses of patients who lived less than two hours by foot from a public health facility decreased between the baseline and final surveys among the three districts. In the Illéla control district, the decrease was mainly due to lower spending for medicines at the pharmaceutical depots before visiting a health facility. Expenses for treatment at health facilities actually increased between the two periods. In the two test districts of Say and Boboye, the decrease was related to a reduction in expenses for care at the health facilities. The decrease was comparatively larger in the Boboye test district because of lower expenditures for medicines before a visit to a health facility. In the Say test district, however, these medicine expenses remained the same.

In the Illéla control district, illness-related expenses increased between the baseline and final surveys among patients who lived more than two hours by foot from public health facility. These expenses decreased, however, in the Say and Boboye test districts. As is the case for the villages located near the health facilities, the decrease for the villages far from a health facility was comparatively larger in the Boboye district than in the Say district because of lower expenses for medicines before a visit to a health facility. As mentioned above, these expenses for medicines remained the same in the Say district.

The different results for the Say and Boboye test districts suggest that the purchase of medicines is very much affected by the fees charged at public health facilities. The price of medicines in the informal market remained relatively low, as a result of flexibility in packaging and possibly because of lower prices from suppliers. As a result, the higher the fee charged at health facilities, the less it deters those with illness from purchasing medicines in the informal market.

Variation According to Income

Exhibits 7.2g, 7.2h, and 7.2i show the changes in the expenses incurred by patients at public health facilities according to income group for the Illéla control district, Say test district, and Boboye test district, respectively.

In the Illéla control district, the expenses incurred for care at home by patients at public health facilities decreased among the low and high income groups. However, while the expenses incurred for care at the facilities increased by only 38 percent between the baseline and final surveys among patients from the poorest households, these expenses increased by more than 100 percent among the patients from the wealthiest households (see *Exhibit 7.2g*).

EXHIBIT 7.2g - ILLELA DISTRICT
 ILLNESS-RELATED EXPENSES AMONG PERSONS WITH AN ILLNESS WHO USED A PUBLIC HEALTH FACILITY DURING THE
 TWO WEEKS PRECEDING THE INTERVIEW: BY INCOME GROUP

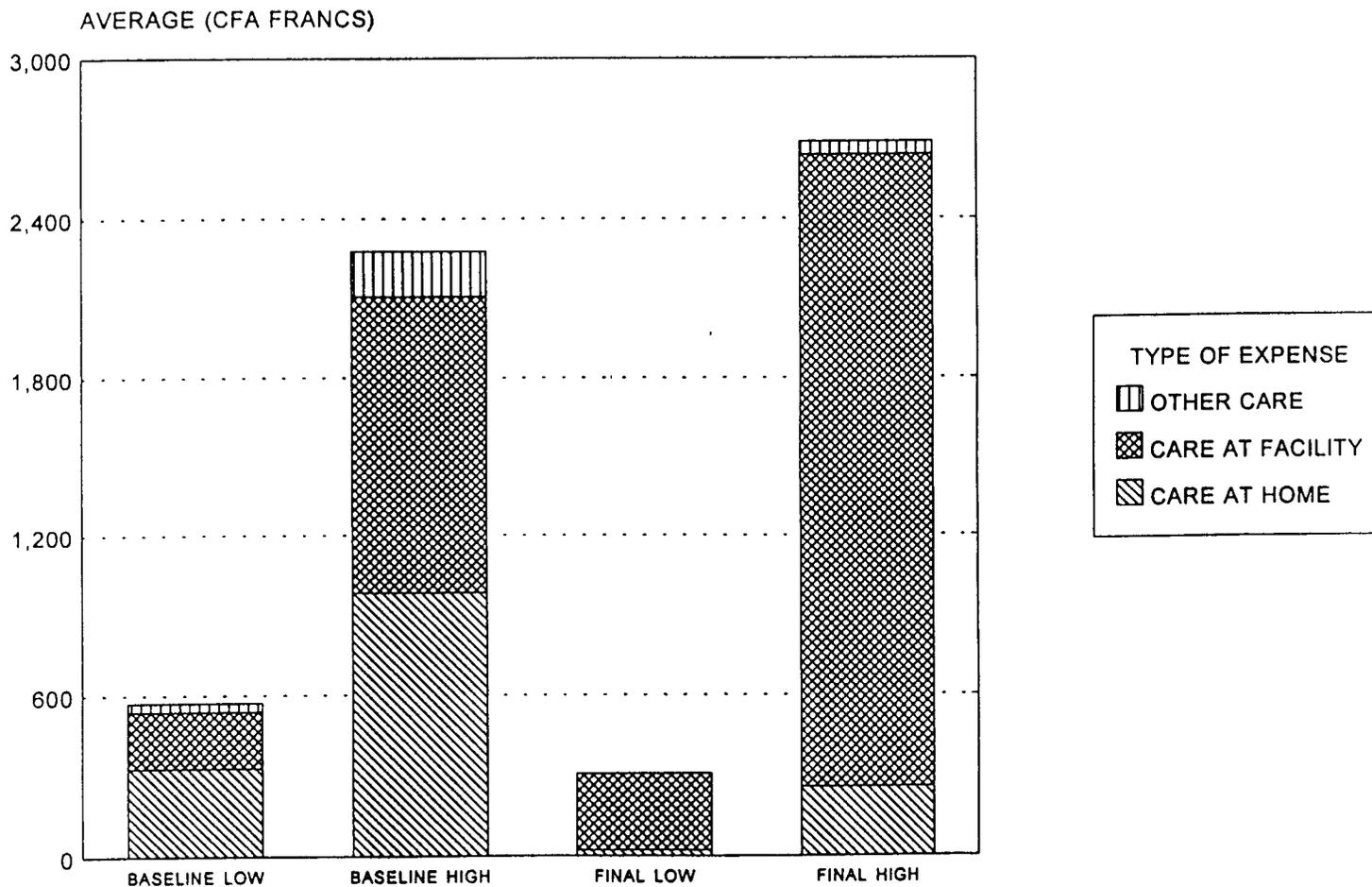


EXHIBIT 7.2h - SAY DISTRICT
 ILLNESS-RELATED EXPENSES AMONG THE PERSONS WITH AN ILLNESS WHO USED A PUBLIC HEALTH FACILITY DURING
 THE TWO WEEKS PRECEDING THE INTERVIEW: BY INCOME GROUP

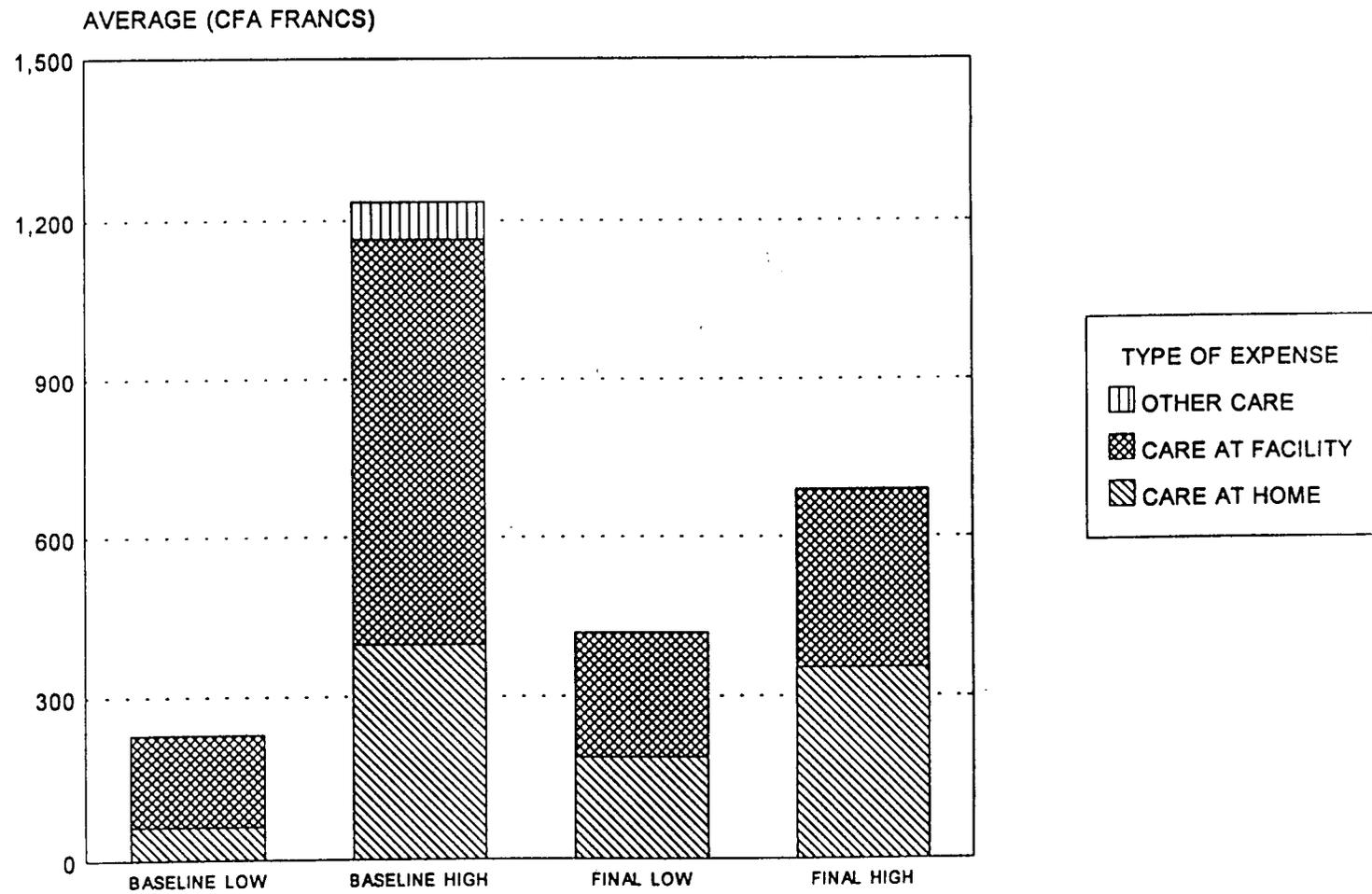
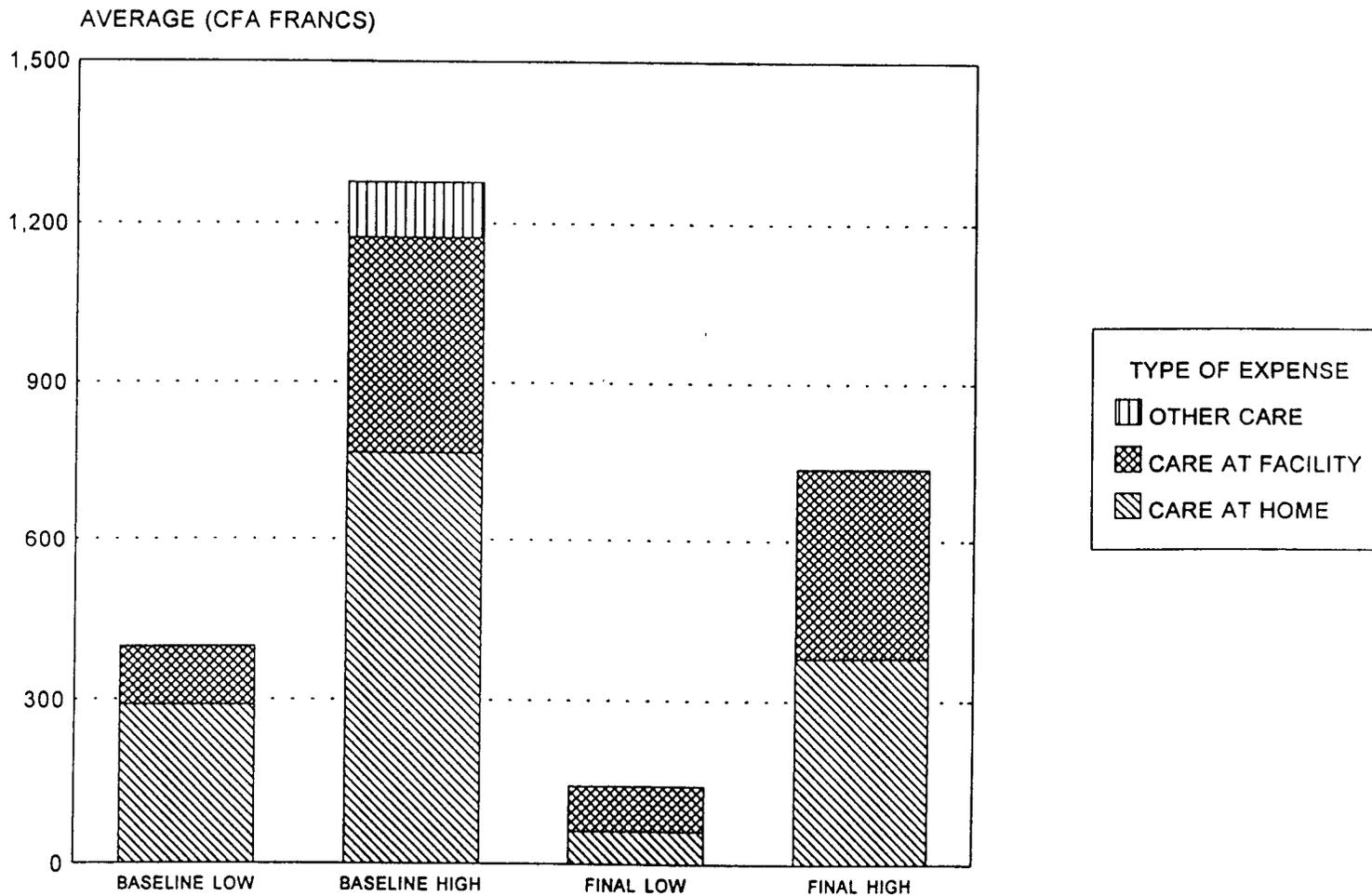


EXHIBIT 7.21 - BOBOYE DISTRICT
 ILLNESS-RELATED EXPENSES AMONG THE PERSONS WITH AN ILLNESS WHO USED A PUBLIC HEALTH FACILITY DURING
 THE TWO WEEKS PRECEDING THE INTERVIEW: BY INCOME GROUP



In the Say test district, only patients from the wealthiest households experienced a decrease in illness-related expenses. In fact, the expenses incurred by patients from the poorest households increased by 82 percent between the baseline and final surveys. This increase was mainly due to increased expenses for care at home. At the other end of the scale, the expenses incurred by patients from the wealthiest households decreased by 44 percent between the baseline and final surveys. This decrease was mainly due to lower expenses for treatment at public health facilities, which decreased an average of 70 percent.

Finally, in the Boboye test district, the decrease in illness-related expenses among patients at the public health facilities was noted among all the income groups. For patients from the lowest income groups, expenses decreased by 64 percent between the baseline and final surveys. For the patients from the highest income groups, expenses decreased by 42 percent. Expenses for care at home before visiting a public health facility declined, particularly for the patients from the poorest households.

C.

7.3 THE IMPACT OF ILLNESS-RELATED EXPENSES

Adding all the illness-related expenses for a household allows one to assess the impact of these expenses on a household's total monthly monetary expenses. Since illness-related expenses were counted for the two week period preceding the interview, we need to convert the illness-related expenses to a monthly basis. This has been done by multiplying the illness-related expenses by two.

Under the indirect payment method used in the Boboye district, tax payers contributed 200 FCFA a year to finance the purchase of medicines. To take this tax surcharge into account, we have used the assumption that all household members age 18 and older contributed 16.67 FCFA per month. In addition, we assume that all the households paid the district tax regardless of their income group. These working hypotheses will enable us to assess the impact of illness-related expenses, with and without the tax component, under the indirect payment method used in the Boboye district.

The percentage of a household's monthly monetary expenses related to illness was used to determine the impact of illness-related expenses. *Exhibits 7.3a, 7.3b, and 7.3c* show the variation between the baseline and final surveys in terms of the impact of illness-related expenses among the various income groups for the Illéla control district, Say test district, and Boboye test district, respectively.

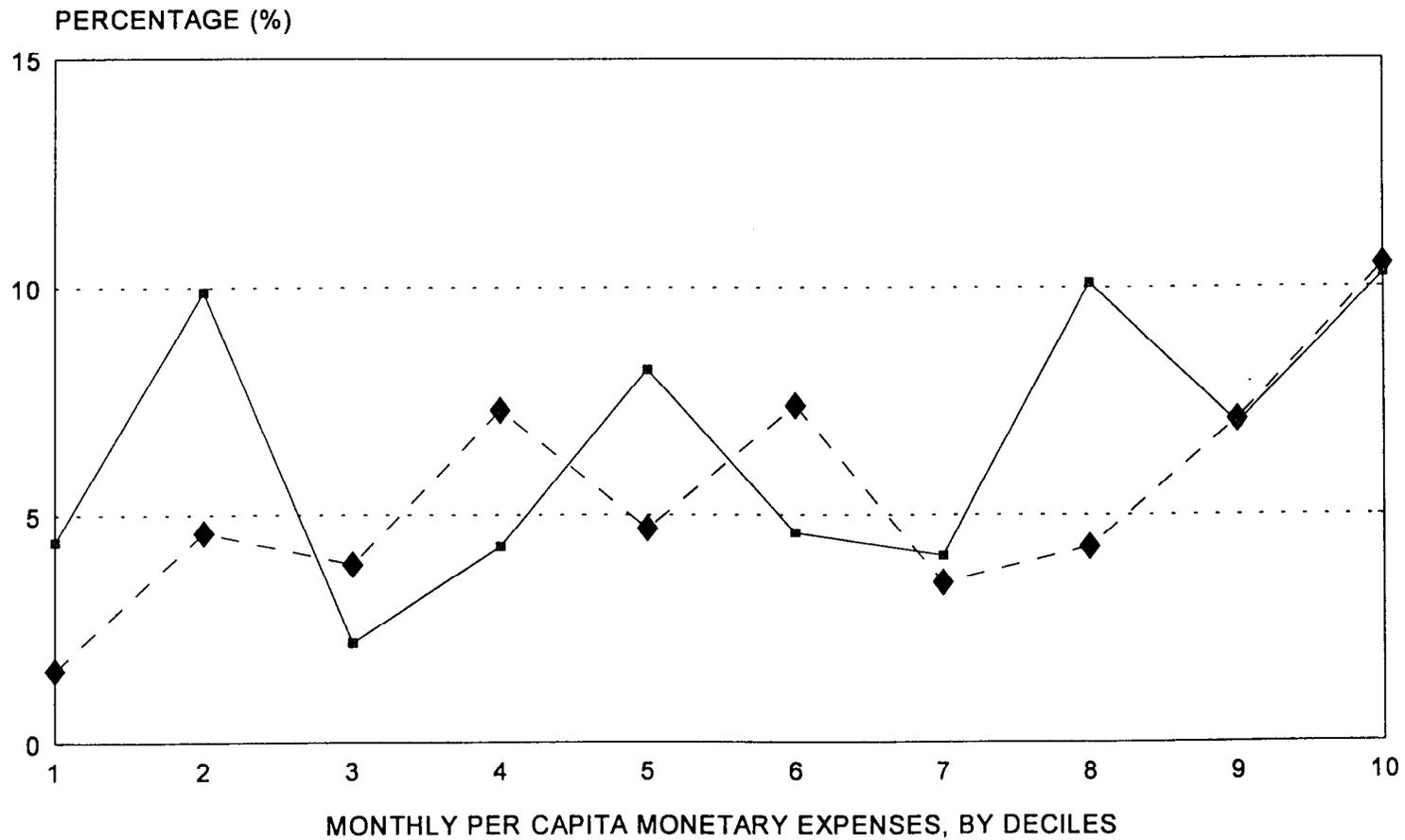
The distribution of per capita monetary expenses per month is divided into deciles to group the households by income. At the low end, the first decile (Decile 1) represents the 10 percent of households with the lowest income, while at the upper end, the tenth decile (Decile 10) represents the 10 percent of households with the highest income.

In the Illéla control district, the percentage of illness-related expenses fluctuated around 5 percent for 60 percent of the poorest households (*see Exhibit 7.3a*). Beginning with the seventh decile, however, the percentage of illness-related expenses increased with income, reaching 10 percent among the ten percent of households with the highest income. Aside from the decrease in the impact of illness-related expenses for the 20 percent of the poorest households in the final survey, the impact of illness-related expenses remained approximately the same between the baseline and final surveys among households in the Illéla district.

In the Say test district, where the direct payment method was used, the impact of illness-related expenses remained the same between the baseline and final surveys for the 40 percent of households with the lowest income (*see Exhibit 7.3b*). In the intermediate income groups, the impact of illness-related expenses increased between the baseline and final surveys. And among the 30 percent of households with the highest income, the impact of illness-related expenses decreased between the baseline and final surveys.

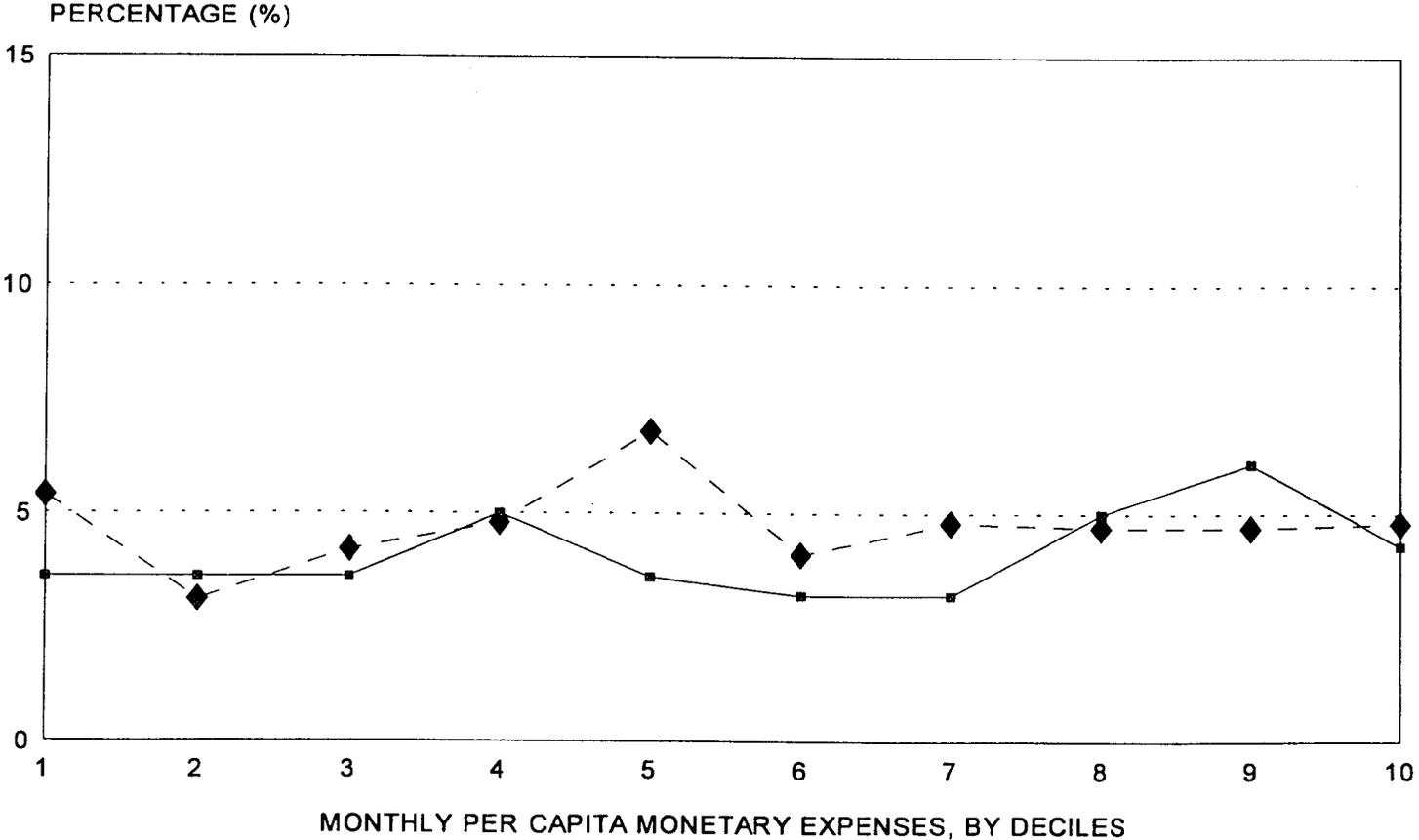
In the Boboye test district, where the indirect payment method was used, the impact of direct payment related to illness decreased between the baseline and final surveys with the exception of the 20 percent of the poorest households (*see Exhibit 7.3c*). Among the 10 percent of the poorest households, the impact actually increased. Factoring the tax surcharge into the expenses related to illness yields the same conclusions. It should be noted, however, that the tax surcharge for all individuals age 18 and older had a greater impact as household income decreased. This finding raises the issue of exempting the poor from the district tax surcharge used to finance medicines at the local level.

Graph 7.3a - ILLELA DISTRICT
PERCENTAGE OF MONTHLY HOUSEHOLD MONETARY EXPENSES RELATED TO ILLNESS:
COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS (AMONG THE HOUSEHOLDS SURVEYED)



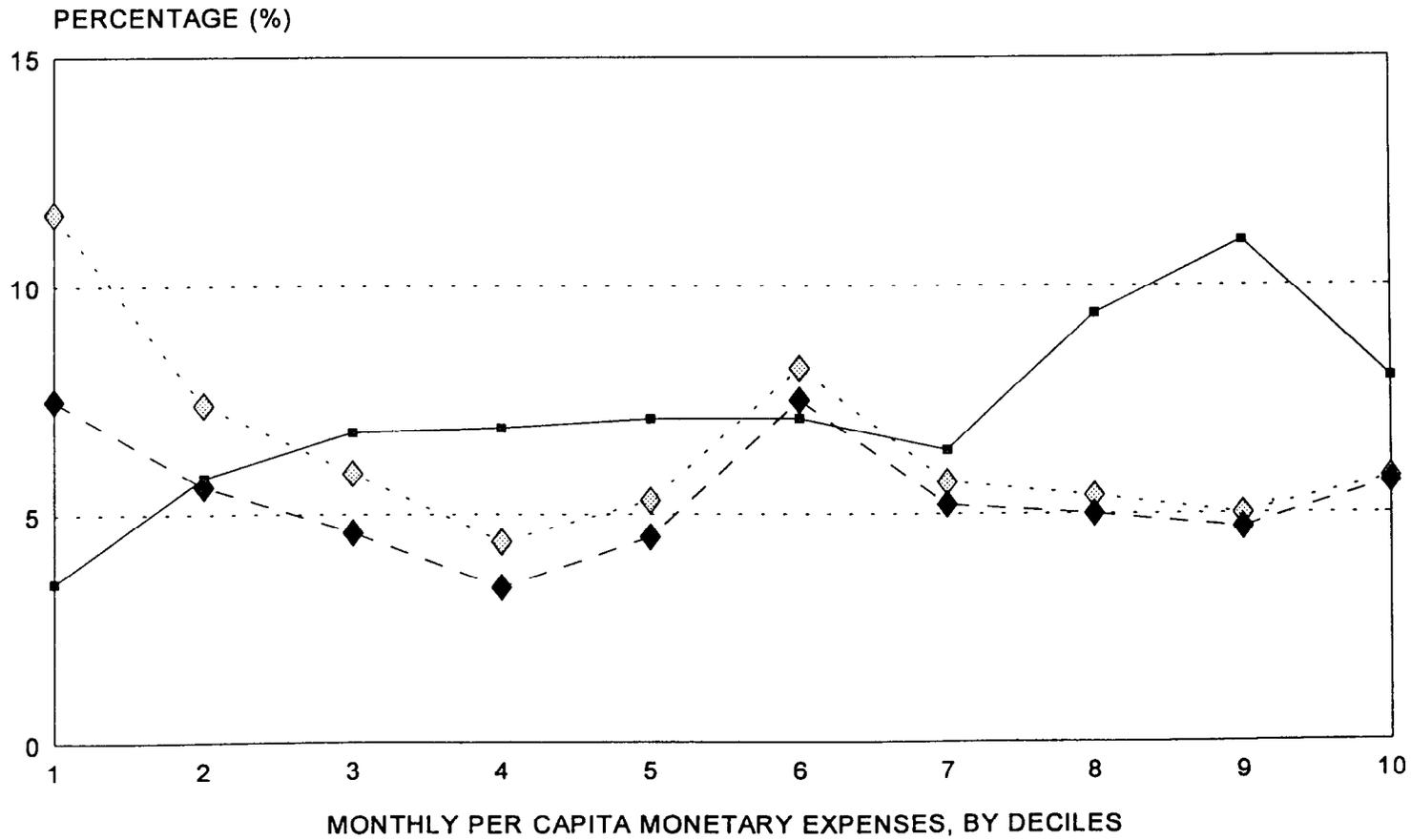
SURVEY
—■— BASELINE —◆— FINAL

Graph 7.3b - SAY DISTRICT
PERCENTAGE OF MONTHLY HOUSEHOLD MONETARY EXPENSES RELATED TO ILLNESS:
COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS (AMONG THE HOUSEHOLDS SURVEYED)



SURVEY
—■— BASELINE —◆— FINAL

Graph 7.3c - BOBOYE DISTRICT
 PERCENTAGE OF MONTHLY HOUSEHOLD MONETARY EXPENSES RELATED TO ILLNESS:
 COMPARISON BETWEEN THE BASELINE AND FINAL SURVEYS (AMONG THE HOUSEHOLDS SURVEYED)



SURVEY

BASELINE FINAL WITHOUT TAX FINAL WITH TAX

VIII..0 8.0 PAYMENT FOR CARE

On the final survey, a questionnaire on payment for care was administered among the sample population in the Boboye and Say test districts, where efforts had been made to improve the quality of care. The questionnaire was given to all individuals present at the home who were age 15 or older. In this section, we shall describe the population's willingness to pay for care to ensure that medicines are available at the public health facilities, as they had been during the six months before the final survey, when the initial supplies of medicines had been stocked at the health facilities and payment for care began. In addition, we shall provide a quantitative summary of the population's preferences and attitudes regarding the payment methods being tested.

A. 8.1 THE WILLINGNESS TO PAY FOR CARE

Table 8.1a shows the responses concerning the willingness to pay for improvements in the quality of care in the Boboye and Say districts. The percentage of individuals age 15 and older who stated that they were prepared to pay all the time to ensure the availability of medicines at public health facilities was 88 percent in the Say district and 92 percent in the Boboye district. In other words, almost all of the respondents were willing to continue paying for care to ensure that medicines would be available in the two districts. This result was observed for all the socio-demographic and economic groups within each test district (*see Tables 8.1a and 8.1b*).

Exhibits 8.1a and 8.1b describe the changes in the Say and Boboye districts respectively in the percentage of individuals prepared to pay all the time according to their income group. It can be noted that among persons in the lowest income groups, the first and second deciles, the percentage of individuals who stated they were prepared to pay all the time was as high as the percentage from the higher income groups.

More than 60 percent of the respondents in the two districts stated that they were prepared to pay more than the fee charged in their district (*see Table 8.1a and 8.1b*). Within each district, a slightly higher percentage of men than women stated that they were prepared to pay more than the fee charged. The Fulani were notable for having a lower percentage of people who stated they were prepared to pay more than the current fee in each district. Furthermore, *Exhibits 8.1a and 8.1b* show that there was little difference among to income groups in the percentage of those who stated they were prepared to pay more than the current fee.

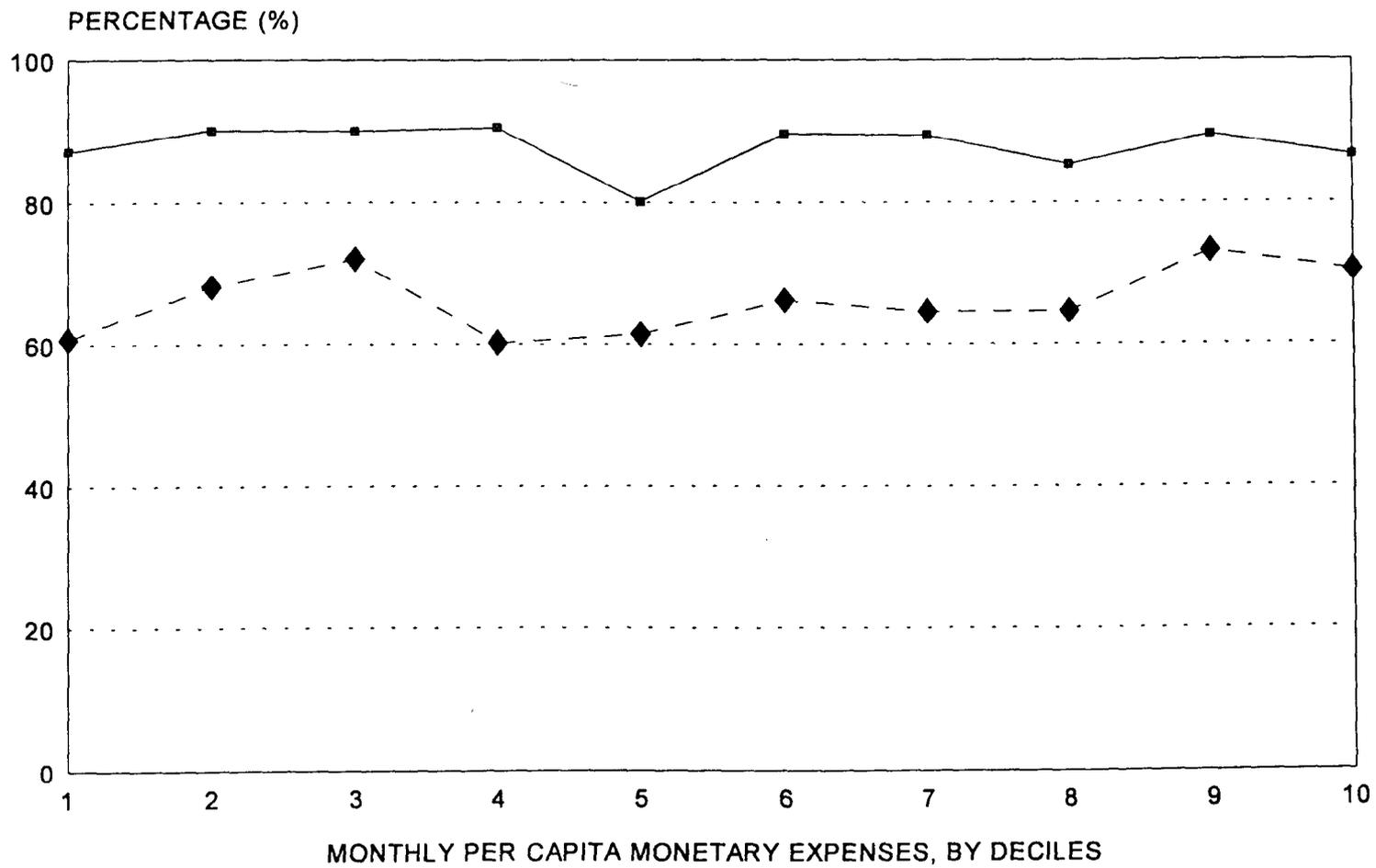
TABLE 8.1a
WILLINGNESS TO PAY FOR HEALTH CARE IMPROVEMENTS
PERCENTAGE (%) OF INDIVIDUALS WHO STATED THEY WERE WILLING TO PAY ALL THE TIME OR TO PAY MORE
THAN THE CURRENT FEE: BY SEVERAL SOCIO-DEMOGRAPHIC CHARACTERISTICS AND BY DISTRICT
(AMONG THE INDIVIDUALS AGE 15 AND OLDER)

	DISTRICT					
	SAY			BOBOYE		
	Willing to Pay All the Time	Willing to Pay More	Number of Respondents	Willing to Pay All the Time	Willing to Pay More	Number of Respondents
Age in Years						
< 18	80.4	55.5	209	89.7	63.2	261
18-24	87.0	65.6	346	90.6	63.6	360
25-34	91.5	70.2	399	92.0	61.4	487
35-44	90.2	64.6	336	94.8	64.5	363
45-54	90.0	71.6	261	93.2	57.1	294
55 +	85.0	65.4	301	89.8	62.4	343
Sex						
Male	88.8	69.1	874	96.1	69.7	927
Female	87.1	63.4	978	88.3	56.1	1,181
Ethnic Group						
DJERMA	89.0	73.0	382	91.6	61.9	1,599
HAUSA	89.9	79.0	119	94.6	72.0	93
FULANI	85.5	63.0	708	91.7	58.6	338
OTHERS	89.6	63.0	643	92.3	69.2	78
Strata						
With Pub. Health Fac.	82.9	62.9	280	93.9	60.6	327
Without Pub. Health Fac.	88.8	66.7	1,572	91.4	62.4	1,781
TOTAL	87.9	66.1	1,852	91.7	62.1	2,108

TABLE 8.1b
WILLINGNESS TO PAY FOR HEALTH CARE IMPROVEMENTS
PERCENTAGE (%) OF INDIVIDUALS WHO STATED THEY WERE WILLING TO PAY ALL THE TIME OR TO PAY MORE
THAN THE CURRENT FEE: BY SEVERAL ECONOMIC CHARACTERISTICS AND BY DISTRICT
(AMONG THE INDIVIDUALS AGE 15 AND OLDER)

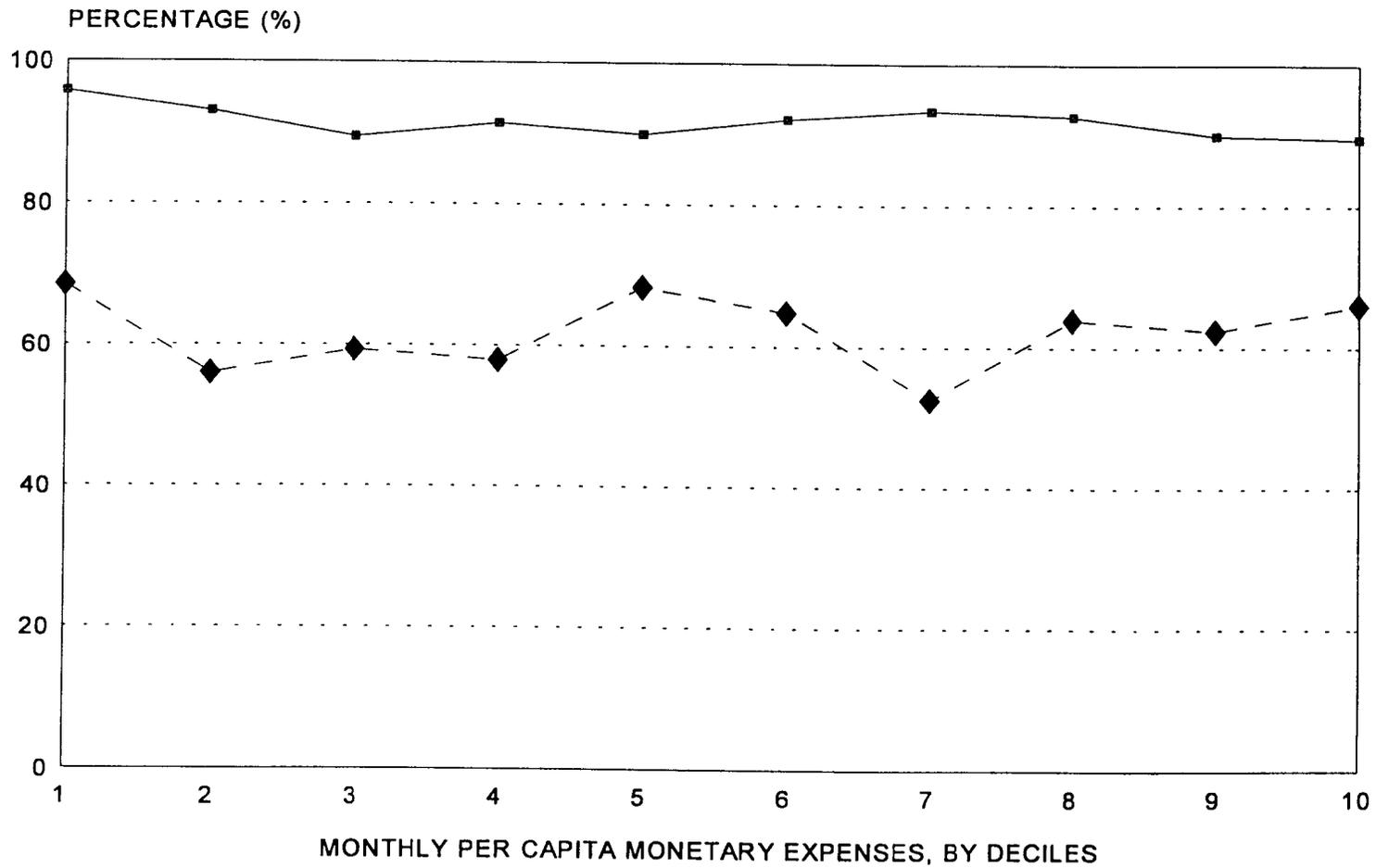
	DISTRICT					
	SAY			BOBOYE		
	Willing to Pay All the Time	Willing to Pay More	Number of Respondents	Willing to Pay All the Time	Willing to Pay More	Number of Respondents
Time by Foot to the Nearest Public Health Facility						
< 1 hr.	84.4	62.8	347	94.3	63.8	473
(1, 2)	86.0	67.0	515	89.5	60.4	589
(2, 3)	86.7	66.4	375	92.3	61.7	491
3 hrs. or more	92.2	67.0	615	91.5	62.7	555
Size of Household						
< 5	87.3	64.7	346	94.5	60.0	220
5-7	90.7	66.6	569	92.7	66.1	634
8-11	86.6	64.9	567	90.7	58.7	681
12 or more	86.2	68.4	370	90.8	62.5	573
Income Group						
Low	88.4	65.9	484	93.7	62.1	559
Medium Low	87.0	63.0	476	90.1	62.1	535
Medium High	89.6	65.6	442	92.2	59.6	502
High	86.7	70.0	450	90.8	64.6	512
TOTAL	87.9	66.1	1,852	91.7	62.1	2,108

Graph 8.1a - PAYMENT FOR CARE
PERCENTAGE OF INDIVIDUALS PREPARED TO PAT THE CURRENT FEE ALL THE TIME AND THOSE PREPARED TO PAY MORE: SAY DISTRICT (AMONG INDIVIDUALS AGE 15 AND OLDER)



■ PREPARED TO PAY ALWAYS ◆ PREPARED TO PAY MORE

Graph 8.1b - PAYMENT FOR CARE
PERCENTAGE OF INDIVIDUALS PREPARED TO PAY THE CURRENT FEE ALL THE TIME AND THOSE PREPARED TO PAY MORE: BOBOYE DISTRICT (AMONG INDIVIDUALS AGE 15 AND OLDER)



■ PREPARED TO PAY ALWAYS ◆ PREPARED TO PAY MORE

Tables 8.1c and 8.1d show the variations in the amounts that the individuals stated they were prepared to pay at health facilities under the system being tested in their district, by several socio-demographic and economic characteristics. The respondents in the Say test district stated that they were prepared to pay an average of 250 FCFA; in the Boboye test district, the respondents stated that they were prepared to pay an average of 90 FCFA. Within each district, there was relatively little variation in the amounts specified by the respondents regardless of the demographic, social, or economic variables considered.

In conclusion, based on statements from individuals age 15 and older in the two test districts of Boboye and Say, the willingness to pay at public health facilities to ensure that medicines are available at those facilities was very high. The percentage of individuals age 15 and older who stated they were prepared to pay all the time to ensure the availability of medicines was about 90 percent in the two test districts of Say and Boboye. In the Say test district, about 66 percent of individuals age 15 and older stated they were prepared to pay more than the current fee of 200 FCFA per illness. In the Boboye test district, about 62 percent of individuals age 15 and older stated they were prepared to pay more than the current co-payment fee of 50 FCFA per illness. The willingness to pay expressed by the respondents varied little by socio-demographic and economic variables within each district. This low rate of variation suggests that changes can be made in the fees currently charged without major consequences on the use of health facilities. The amounts that the individuals stated they were prepared to pay in each district, however, indicate that there would be more flexibility in the co-payment fee structure under the indirect payment system used in Boboye than in the fee structure under the direct payment system used in the Say district.

B.

8.2 METHOD OF PAYMENT: PREFERENCES AND ATTITUDES

The two payment methods, direct and indirect, were described to the respondents, so that their preferences and attitudes toward these payment methods could be determined.⁸ *Tables 8.2a and 8.2b* summarize the respondents' preferences regarding payment methods being tested and the variations in preference among the various socio-demographic and economic groups.

⁸ Question 832 in the Questionnaire on Payment for Health Care:

The adults in your district are being asked to choose between the following two methods of payment to ensure that medicines are available at the dispensary closest to you:

The first method of payment: Each adult is asked to contribute 200 CFA francs once a year. In addition, each person is asked to pay 50 CFA francs at the dispensary each time he or she becomes sick;

The second method of payment: Whenever a person becomes sick, he or she pays 200 CFA francs at the dispensary.

Which of the two methods of payment do you prefer?

See Question 832, Questionnaire on Payment for Care, Annex 1.

In the two test districts of Boboye and Say, almost all of the individuals age 15 and older stated that they preferred the indirect payment method over the direct payment method. In the two districts, about 84 percent of the respondents stated that they preferred the indirect payment method, while 6 to 8 percent preferred the direct method. Within each district, this preference in payment method varied very little among the different socio-demographic and economic groups.

These findings differ greatly from the reports of health workers setting up local financing systems for health care in Africa regarding people's preferences for payment methods. It is evident that the respondents did not take into consideration the different levels of complexity involved in the payment methods and the operating costs for setting them up, whereas these reasons were among those cited by the health technicians.

TABLE 8.1c
WILLINGNESS TO PAY FOR HEALTH CARE IMPROVEMENTS
THE AVERAGE AMOUNTS (CFA F) THE INDIVIDUALS STATED THEY WERE PREPARED TO PAY TO ENSURE
THAT MEDICINES WOULD BE AVAILABLE AT PUBLIC HEALTH FACILITIES:
BY SEVERAL SOCIO-DEMOGRAPHIC CHARACTERISTICS AND BY DISTRICT
(AMONG THE INDIVIDUALS AGE 15 AND OLDER)

	DISTRICT			
	SAY		BOBOYE	
	Amount Prepared to Pay (CFA F)	Number of Respondents	Amount Prepared to Pay (CFA F)	Number of Respondents
Age in Years				
< 18	215.1	209	91.3	261
18-24	240.0	346	90.7	360
25-34	263.6	399	88.1	487
35-44	257.4	336	95.2	363
45-54	250.0	261	86.5	294
55 +	251.0	301	88.2	343
Sex				
Male	262.3	874	100.7	927
Female	236.4	978	81.5	1,181
Ethnic Group				
DJERMA	244.9	382	90.5	1,599
HAUSA	286.6	119	103.8	93
FULANI	249.6	708	79.0	338
OTHERS	242.7	643	110.4	78
Strata				
With Pub. Health Fac.	239.7	280	85.5	327
Without Pub. Health Fac.	250.2	1,572	90.8	1,781
TOTAL	248.6	1,852	90.0	2,108

TABLE 8.1d
WILLINGNESS TO PAY FOR HEALTH CARE IMPROVEMENTS
THE AVERAGE AMOUNTS (CFA F) THE INDIVIDUALS STATED THEY WERE PREPARED TO PAY TO ENSURE
THAT MEDICINES WOULD BE AVAILABLE AT PUBLIC HEALTH FACILITIES:
BY SEVERAL ECONOMIC CHARACTERISTICS AND BY DISTRICT
(AMONG THE INDIVIDUALS AGE 15 AND OLDER)

	DISTRICT			
	SAY		BOBOYE	
	Amount Prepared to Pay (CFA F)	Number of Respondents	Amount Prepared to Pay (CFA F)	Number of Respondents
Time by Foot to the Nearest Public Health Facility				
< 1 hr.	239.1	347	86.0	473
[1, 2)	254.1	515	89.5	589
[2, 3)	247.5	375	89.4	491
3 hrs. or more	250.1	615	94.3	555
Size of Household				
< 5	246.7	346	88.8	220
5-7	258.1	569	89.9	634
8-11	247.2	567	86.3	681
12 or more	237.9	370	94.8	573
Income Group				
Low	236.0	484	84.3	559
Medium Low	240.8	476	90.0	535
Medium High	247.7	442	88.0	502
High	271.3	450	98.1	512
TOTAL	248.6	1,852	90.0	2,108

TABLE 8.2a
PAYMENT METHOD PREFERENCES
PAYMENT METHOD PREFERRED BY THE RESPONDENTS
BY SEVERAL SOCIO-DEMOGRAPHIC CHARACTERISTICS AND BY DISTRICT
(AMONG THE INDIVIDUALS AGE 15 AND OLDER)

	DISTRICT					
	SAY			BOBOYE		
	Percentage (%) Who Preferred			Percentage (%) Who Preferred		
	Indirect Payment	Direct Payment	Number of Respondents	Indirect Payment	Direct Payment	Number of Respondents
Age in Years						
< 18	75.1	8.1	209	82.8	9.2	261
18-24	82.7	6.9	346	84.7	8.3	360
25-34	87.0	6.8	399	86.7	8.0	487
35-44	86.6	6.3	336	87.9	7.2	363
45-54	92.0	3.1	261	88.8	6.5	294
55 +	79.4	9.0	301	75.5	7.0	343
Sex						
Male	84.4	7.8	874	86.7	10.7	927
Female	84.0	5.7	978	82.8	5.3	1,181
Ethnic Group						
DJERMA	88.5	5.2	382	85.4	7.5	1,599
HAUSA	80.7	6.7	119	81.7	8.6	93
FULANI	82.9	7.1	708	79.3	9.2	338
OTHERS	83.8	7.2	643	92.3	3.8	78
Strata						
With Pub. Health Fac.	75.0	13.9	280	83.8	7.3	327
Without Pub. Health Fac.	85.9	5.4	1,572	84.7	7.7	1,781
TOTAL	84.2	6.7	1,852	84.5	7.7	2,108

TABLE 8.2b
 PAYMENT METHOD PREFERENCES
 PAYMENT METHOD PREFERRED BY THE RESPONDENTS:
 BY SEVERAL ECONOMIC CHARACTERISTICS AND BY DISTRICT
 (AMONG THE INDIVIDUALS AGE 15 AND OLDER)

	DISTRICT					
	SAY			BOBOYE		
	Percentage (%) Who Preferred			Percentage (%) Who Preferred		
	Indirect Payment	Direct Payment	Number of Respondents	Indirect Payment	Direct Payment	Number of Respondents
Time by Foot to the Nearest Public Health Facility						
< 1 hr.	74.6	15.6	347	83.5	7.6	473
[1, 2)	84.7	5.6	515	85.9	6.6	589
[2, 3)	87.5	4.0	375	87.8	4.3	491
3 hrs. or more	87.3	4.2	615	81.1	11.9	555
Size of Household						
< 5	83.2	6.1	346	83.2	7.7	220
5-7	87.2	5.8	569	86.3	8.4	634
8-11	82.0	7.1	567	84.1	7.0	681
12 or more	84.1	8.1	370	83.6	7.7	573
Income Group						
Low	86.8	3.3	484	85.2	7.5	559
Medium Low	83.0	6.7	476	86.0	5.0	535
Medium High	86.4	6.3	442	82.9	7.6	502
High	80.7	10.7	450	84.0	10.7	512
TOTAL	84.2	6.7	1,852	84.5	7.7	2,108

Exhibit 8.2a shows the reasons why direct payment was not preferred by the respondents in the two test districts who showed a preference for the indirect payment method.⁹ Fifty-five (55) percent of the respondents in the Boboye test district stated that they did not prefer the direct payment method because they could not afford it. An additional 26 percent stated that they did not prefer this method because it would be difficult coming up with 200 FCFA for each illness. Finally, 17 percent of the respondents stated that they did not prefer the this method because the cost was too high. In the Say test district, these percentages were as follows: could not afford it—61 percent; difficult coming up with 200 FCFA for each illness—19 percent; and cost too high—12 percent. The distribution was therefore similar for the respondents in each of the districts by the reasons why they did not prefer the direct payment method.

Within a given district, the distribution of the respondents by the reasons why they did not prefer the direct payment method was comparable among the various socio-demographic and economic groups (*see Tables 8.2c, 8.2d, 8.2e, and 8.2f*).

Exhibit 8.2b shows the reasons why the indirect payment method was preferred by those in the two test districts who stated they preferred this method. Fifty-six (56) percent of the respondents in the Boboye test district stated they preferred the indirect method because it was less expensive. Twenty (20) percent of the respondents stated they preferred this method because it was easy to come up with 200 FCFA a year. An additional 8 percent stated that it was easy to come up with 50 FCFA for each illness, and 9 percent stated that it was easy to come up with 200 FCFA a year and 50 CFA for each illness. In the Say test district, these percentages were as follows: less expensive—26 percent; easy to come up with 200 FCFA a year—46 percent; easy to come up with 50 FCFA for each illness—2 percent; and easy to come up with 200 FCFA a year and 50 FCFA for each illness—17 percent. Thus, while the majority of the respondents in the Boboye test district emphasized the comparative costs of the two payment methods as they perceived these costs, the respondents from the Say test district tended to respond in terms of the system being used in the district. In fact, about 62 percent of the respondents in the Say district stated that they preferred the indirect payment method because it would be easy to come up with 200 FCFA a year.

⁹ These answers were in response to an open-ended question and were coded during data analysis.

Graph 8.2a
DISTRIBUTION (%) OF THE RESPONDENTS WHO PREFERRED THE INDIRECT PAYMENT METHOD
ACCORDING TO THE REASON WHY THEY DID NOT PREFER THE DIRECT PAYMENT METHOD

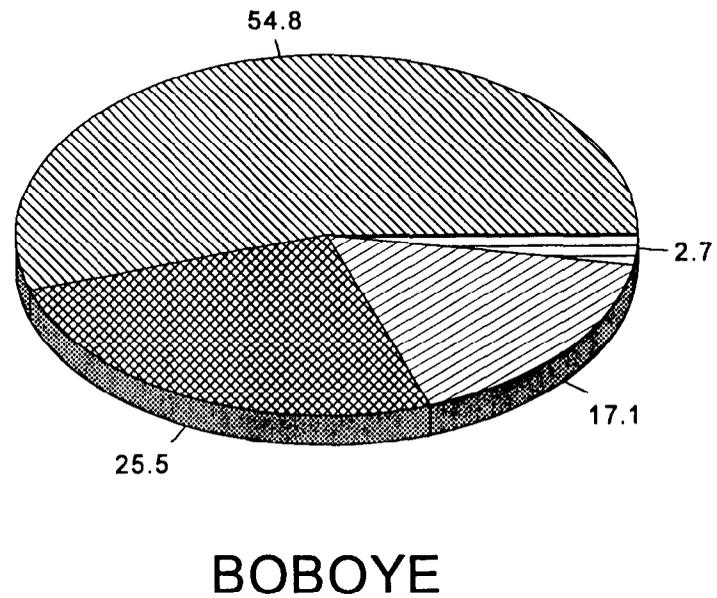
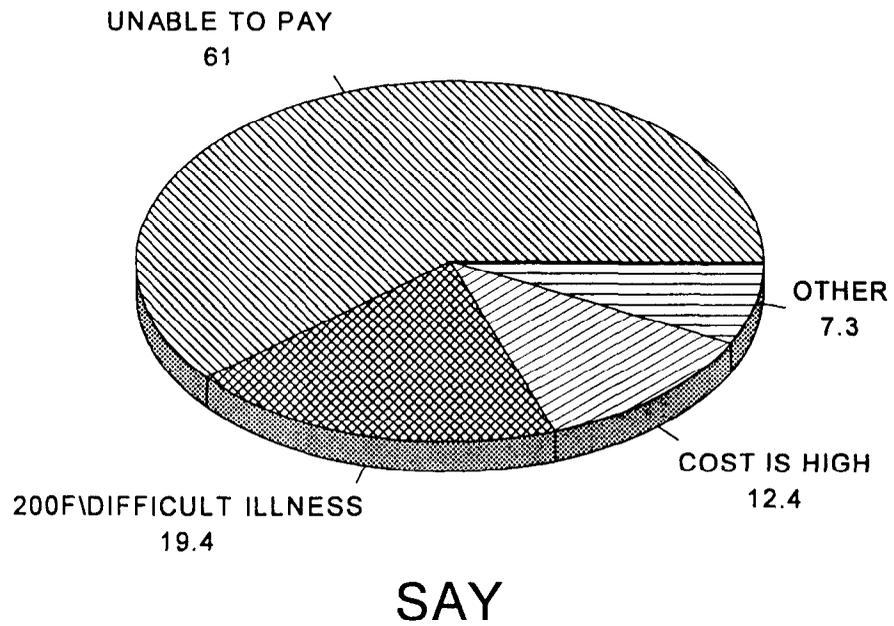


TABLE 8.2c
PAYMENT METHOD PREFERENCES: SAY DISTRICT
DISTRIBUTION (%) OF THE RESPONDENTS WHO PREFERRED THE INDIRECT PAYMENT METHOD
ACCORDING TO THE REASON WHY THEY DID NOT PREFER THE DIRECT PAYMENT METHOD:
BY SEVERAL SOCIO-DEMOGRAPHIC CHARACTERISTICS
(AMONG THE INDIVIDUALS AGE 15 AND OLDER WHO PREFERRED THE INDIRECT PAYMENT METHOD)

	Reason Why They Did Not Prefer the Direct Payment Method						Number of Respondents
	Cost is High	Can't Afford It	Difficult to Find 200F/ Illness	Other Reason	Not Stated	Total	
Age in Years							
< 18	9.6	58.6	15.3	12.7	3.8	100.0	157
18-24	13.6	64.0	15.7	2.1	4.5	100.0	286
25-34	11.5	64.8	17.9	2.6	3.2	100.0	347
35-44	12.4	61.9	21.0	1.4	3.4	100.0	291
45-54	18.3	55.4	18.3	2.9	5.0	100.0	240
55 +	8.4	57.7	27.6	2.1	4.2	100.0	239
Sex							
Male	13.0	57.6	21.3	4.1	4.1	100.0	738
Female	11.9	64.0	17.6	2.6	3.9	100.0	822
Ethnic Group							
DJERMA	9.8	60.7	22.8	2.1	4.7	100.0	338
HAUSA	14.6	61.5	16.7	2.1	5.2	100.0	96
FULANI	15.3	59.6	17.5	5.5	2.0	100.0	587
OTHERS	10.6	62.5	19.7	1.9	5.4	100.0	539
Strata							
With Pub. Health Fac.	10.5	48.6	15.2	3.8	21.9	100.0	210
Without Pub. Health Fac.	12.7	62.9	20.0	3.2	1.2	100.0	1,350
TOTAL	12.4	61.0	19.4	3.3	4.0	100.0	1,560

TABLE 8.2d
PAYMENT METHOD PREFERENCES: BOBOYE DISTRICT
DISTRIBUTION (%) OF THE RESPONDENTS WHO PREFERRED THE INDIRECT PAYMENT METHOD
ACCORDING TO THE REASON WHY THEY DID NOT PREFER THE DIRECT PAYMENT METHOD:
BY SEVERAL SOCIO-DEMOGRAPHIC CHARACTERISTICS
(AMONG THE INDIVIDUALS AGE 15 AND OLDER WHO PREFERRED THE INDIRECT PAYMENT METHOD)

	Reason Why They Did Not Prefer the Direct Payment Method						Number of Respondents
	Cost is High	Can't Afford It	Difficult to Find 200F/ Illness	Other Reason	Not Stated	Total	
Age in Years							
< 18	20.8	52.3	23.6	2.3	.9	100.0	216
18-24	22.0	56.4	19.7	1.0	1.0	100.0	305
25-34	17.1	54.3	26.5	1.4	.7	100.0	422
35-44	13.2	55.2	28.8	2.5	.3	100.0	319
45-54	14.6	54.8	28.0	1.5	1.1	100.0	261
55 +	15.8	55.2	25.5	2.7	.8	100.0	259
Sex							
Male	18.8	51.6	26.9	2.2	.5	100.0	804
Female	15.7	57.4	24.3	1.5	1.0	100.0	978
Ethnic Group							
DJERMA	16.5	54.4	26.7	1.8	.5	100.0	1,366
HAUSA	30.3	46.1	17.1	2.6	3.9	100.0	76
FULANI	17.2	58.2	22.4	1.9	.4	100.0	268
OTHERS	13.9	58.3	22.2	1.4	4.2	100.0	72
Strata							
With Pub. Health Fac.	19.7	55.1	24.1	.7	.4	100.0	274
Without Pub. Health Fac.	16.6	54.7	25.7	2.1	.9	100.0	1,508
TOTAL	17.1	54.8	25.5	1.9	.8	100.0	1,782

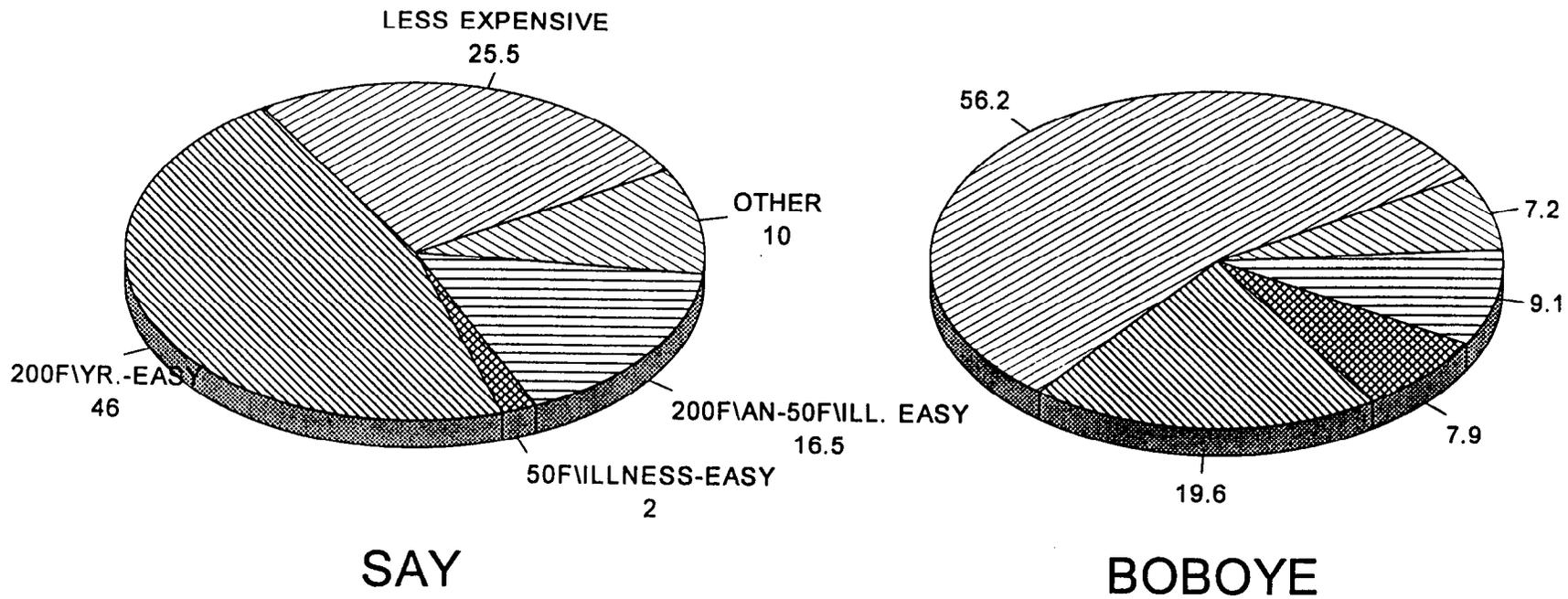
TABLE 8.2e
PAYMENT METHOD PREFERENCES: SAY DISTRICT
DISTRIBUTION (%) OF THE RESPONDENTS WHO PREFERRED THE INDIRECT PAYMENT METHOD
ACCORDING TO THE REASON WHY THEY DID NOT PREFER THE DIRECT PAYMENT METHOD:
BY SEVERAL SOCIO-ECONOMIC CHARACTERISTICS
(AMONG THE INDIVIDUALS AGE 15 AND OLDER WHO PREFERRED THE INDIRECT PAYMENT METHOD)

	Reason Why They Did Not Prefer the Direct Payment Method						Number of Respondents
	Cost is High	Can't Afford It	Difficult to Find 200F/ Illness	Other Reason	Not Stated	Total	
Time by Foot to the Nearest Public Health Facility							
< 1 hr.	14.3	56.0	21.2	6.2	2.3	100.0	259
[1, 2)	12.2	65.1	18.3	2.5	1.8	100.0	436
[2, 3)	7.0	72.6	18.6	.9	.9	100.0	328
3 hrs. or more	15.1	52.9	19.7	3.9	8.4	100.0	537
Size of Household							
< 5	14.2	60.1	17.4	1.7	6.6	100.0	288
5-7	12.1	58.9	21.4	3.4	4.2	100.0	496
8-11	10.8	62.8	20.6	3.9	1.9	100.0	465
12 or more	13.8	62.4	16.1	3.5	4.2	100.0	311
Income Group							
Low	11.7	59.3	21.7	1.4	6.0	100.0	420
Medium Low	10.4	65.3	18.0	3.8	2.5	100.0	395
Medium High	11.8	59.7	22.0	4.2	2.4	100.0	382
High	16.3	59.5	15.4	3.9	5.0	100.0	363
TOTAL	12.4	61.0	19.4	3.3	4.0	100.0	1,560

TABLE 8.2f
 PAYMENT METHOD PREFERENCES: BOBOYE DISTRICT
 DISTRIBUTION (%) OF THE RESPONDENTS WHO PREFERRED THE INDIRECT PAYMENT METHOD
 ACCORDING TO THE REASON WHY THEY DID NOT PREFER THE DIRECT PAYMENT METHOD:
 BY SEVERAL SOCIO-ECONOMIC CHARACTERISTICS
 (AMONG THE INDIVIDUALS AGE 15 AND OLDER WHO PREFERRED THE INDIRECT PAYMENT METHOD)

	Reason Why They Did Not Prefer the Direct Payment Method						Number of Respondents
	Cost is High	Can't Afford It	Difficult to Find 200F/ Illness	Other Reason	Not Stated	Total	
Time by Foot to the Nearest Public Health Facility							
< 1 hr.	20.0	55.7	21.0	1.8	1.5	100.0	395
[1, 2)	14.4	56.1	27.5	1.4	.6	100.0	506
[2, 3)	15.3	54.3	26.9	3.0	.5	100.0	431
3 hrs. or more	19.3	52.9	25.8	1.3	.7	100.0	450
Size of Household							
< 5	18.0	56.8	23.5	1.1	.5	100.0	183
5-7	14.1	57.8	26.0	1.6	.5	100.0	547
8-11	17.8	53.8	25.5	1.7	1.2	100.0	573
12 or more	19.4	51.8	25.7	2.5	.6	100.0	479
Income Group							
Low	16.8	51.5	28.6	2.7	.4	100.0	476
Medium Low	18.9	53.5	25.2	1.7	.7	100.0	460
Medium High	15.4	55.5	26.7	1.7	.7	100.0	416
High	17.2	59.1	21.2	1.2	1.4	100.0	430
TOTAL	17.1	54.8	25.5	1.9	.8	100.0	1,782

Graph 8.2b
 DISTRIBUTION (%) OF THE RESPONDENTS WHO PREFERRED THE INDIRECT PAYMENT METHOD,
 BY THE REASON WHY THEY PREFERRED THE INDIRECT METHOD



Within a given district, the distribution of the respondents according to the reasons why they preferred the indirect payment method was comparable among the various socio-demographic and economic groups (*see Tables 8.2g, 8.2h, 8.2i, and 8.2j*).

Tables 8.2k and 8.2l show the attitudes of the respondents in the two districts who preferred the indirect payment method concerning the amount of the yearly contribution. The percentage of individuals who stated that they were prepared to contribute more than 200 FCFA a year was higher in the Say test district, where the direct payment method was used for the pilot tests, than in the Boboye test district, where the indirect payment method was used. Seventy-two (72) percent of the respondents in the Say district stated that they were prepared to contribute more than 200 FCFA; in the Boboye district, this figure was 42 percent. The difference in attitude between the two test districts toward the yearly contribution was observed systematically among the socio-demographic and economic groups. *Exhibit 8.2c* shows that there was very little variation by income level in the percentage of individuals who stated that they were prepared to contribute more than 200 FCFA.

On average, the respondents in the Say test district were prepared to pay 290 FCFA a year under the indirect payment method and the respondents in the Boboye test district were prepared to pay 250 FCFA per year. As shown in *Exhibit 8.2d* individuals who were among the 10 percent of the households with the lowest income in the Say district stated that they were prepared to contribute an average of 250 FCFA a year, compared to 230 FCFA in the Boboye district. At the other end of the scale, individuals who were among the 10 percent of households with the highest income in the Say test district stated that they were prepared to contribute an average of 380 FCFA a year, compared to 290 FCFA in the Boboye test district.

In conclusion, 84 percent of the respondents in the Boboye and Say test districts stated that they preferred the indirect payment method, while six to eight percent preferred the direct payment method. Within each district, these preferences regarding payment methods varied very little by the various socio-demographic and economic groups. The reasons given by respondents for not preferring the direct payment method, and for preferring the indirect payment method, were consistent with the economic considerations of a rural population where disease is widespread, household monetary income is low, and the availability of cash varies with the season. Most of the respondents stated that they did not prefer the direct payment method because they could not afford it, or because they would find it difficult to come up with 200 FCFA for each illness. By contrast, they preferred the indirect payment method because they found that it was less expensive or because they thought it would be easy to come up with 200 FCFA a year.

The attitudes of the respondents concerning the amount of the annual contribution were more affected by the type of payment method they had experienced during the tests than by socio-demographic or economic characteristics of the individuals or their households. The percentage of respondents who stated that they were prepared to contribute more than 200 FCFA a year was higher in the Say test district, where the patients paid 200 FCFA per illness, than in the Boboye test district, where the indirect payment method was tested.

TABLE 8.2g
PAYMENT METHOD PREFERENCES: SAY DISTRICT
DISTRIBUTION (%) OF THE RESPONDENTS WHO PREFERRED THE INDIRECT PAYMENT METHOD
ACCORDING TO THE REASON WHY THEY PREFERRED THIS METHOD:
BY SEVERAL SOCIO-ECONOMIC CHARACTERISTICS
(AMONG THE INDIVIDUALS AGE 15 AND OLDER WHO PREFERRED THE INDIRECT PAYMENT METHOD)

	Reason Why They Preferred the Indirect Payment Method							Total	Number of Respondents
	Less Expensive	Easy to Pay 200F/Yr.	Easy to Pay 50F/Illness	Easy to Pay 200F/Yr. & 50F/Illness	Other Reason	Not Stated			
Age in Years									
< 18	20.4	38.2	2.5	13.4	20.4	5.1	100.0	157	
18-24	26.9	41.6	2.4	18.5	5.6	4.9	100.0	286	
25-34	23.6	47.3	2.3	20.2	3.2	3.5	100.0	347	
35-44	24.4	52.2	2.1	13.4	3.4	4.5	100.0	291	
45-54	34.6	43.3	1.7	12.5	2.5	5.4	100.0	240	
55 +	22.2	49.4	.8	18.8	4.2	4.6	100.0	239	
Sex									
Male	27.0	44.7	2.3	16.1	5.6	4.3	100.0	738	
Female	24.2	47.1	1.7	16.9	5.4	4.7	100.0	822	
Ethnic Group									
DJERMA	18.9	50.6	2.4	18.9	4.1	5.0	100.0	338	
HAUSA	38.5	38.5	1.0	13.5	3.1	5.2	100.0	96	
FULANI	29.1	46.7	1.5	13.1	6.6	2.9	100.0	587	
OTHERS	23.4	43.6	2.4	19.3	5.4	5.9	100.0	539	
Strata									
With Pub. Health Fac.	29.0	35.2	2.4	9.0	1.9	22.4	100.0	210	
Without Pub. Health Fac.	25.0	47.6	1.9	17.7	6.0	1.8	100.0	1,350	
TOTAL	25.5	46.0	2.0	16.5	5.4	4.6	100.0	1,560	

TABLE 8.2h
 PAYMENT METHOD PREFERENCES: BOBOYE DISTRICT
 DISTRIBUTION (%) OF THE RESPONDENTS WHO PREFERRED THE INDIRECT PAYMENT METHOD
 ACCORDING TO THE REASON WHY THEY PREFERRED THIS METHOD:
 BY SEVERAL SOCIO-ECONOMIC CHARACTERISTICS
 (AMONG THE INDIVIDUALS AGE 15 AND OLDER WHO PREFERRED THE INDIRECT PAYMENT METHOD)

	Reason Why They Preferred the Indirect Payment Method							Total	Number of Respondents
	Less Expensive	Easy to Pay 200F/Yr.	Easy to Pay 50F/Illness	Easy to Pay 200F/Yr. & 50F/Illness	Other Reason	Not Stated			
Age in Years									
< 18	54.6	23.1	7.4	6.5	7.4	.9	100.0	216	
18-24	60.3	18.0	6.6	7.9	5.2	2.0	100.0	305	
25-34	59.2	18.7	9.0	7.6	4.7	.7	100.0	422	
35-44	48.3	26.0	6.3	11.3	7.8	.3	100.0	319	
45-54	60.2	16.9	7.7	8.8	5.0	1.5	100.0	261	
55 +	53.3	14.7	10.4	13.1	8.1	.4	100.0	259	
Sex									
Male	52.6	20.9	9.1	10.2	7.0	.2	100.0	804	
Female	59.1	18.5	7.0	8.3	5.6	1.5	100.0	978	
Ethnic Group									
DJERMA	55.6	19.8	7.8	9.6	6.4	.7	100.0	1,366	
HAUSA	61.8	15.8	3.9	7.9	5.3	5.3	100.0	76	
FULANI	58.6	18.3	10.4	8.2	4.1	.4	100.0	268	
OTHERS	51.4	25.0	4.2	5.6	11.1	2.8	100.0	72	
Strata									
With Pub. Health Fac.	50.7	27.4	10.2	5.8	5.5	.4	100.0	274	
Without Pub. Health Fac.	57.2	18.2	7.5	9.7	6.4	1.1	100.0	1,508	
TOTAL	56.2	19.6	7.9	9.1	6.2	1.0	100.0	1,782	

TABLE 8.2i
 PAYMENT METHOD PREFERENCES: SAY DISTRICT
 DISTRIBUTION (%) OF THE RESPONDENTS WHO PREFERRED THE INDIRECT PAYMENT METHOD
 ACCORDING TO THE REASON WHY THEY PREFERRED THIS METHOD:
 BY SEVERAL SOCIO-ECONOMIC CHARACTERISTICS
 (AMONG THE INDIVIDUALS AGE 15 AND OLDER WHO PREFERRED THE INDIRECT PAYMENT METHOD)

	Reason Why They Preferred the Indirect Payment Method							Number of Respondents
	Less Expensive	Easy to Pay 200F/Yr.	Easy to Pay 50F/Illness	Easy to Pay 200F/Yr. & 50F/Illness	Other Reason	Not Stated	Total	
Time by Foot to the Nearest Public Health Facility								
< 1 hr.	32.0	43.2	2.3	16.6	3.1	2.7	100.0	259
{1, 2}	21.1	47.9	2.1	22.5	3.4	3.0	100.0	436
{2, 3}	28.0	46.6	4.0	12.5	7.9	0.9	100.0	328
3 hrs. or more	24.4	45.3	0.6	14.2	6.7	8.9	100.0	537
Size of Household								
< 5	25.0	51.0	0.7	14.6	1.4	7.3	100.0	288
5-7	27.0	42.7	2.4	16.5	6.5	4.8	100.0	496
8-11	25.8	45.4	2.8	17.0	6.7	2.4	100.0	465
12 or more	23.2	47.3	1.3	17.7	5.8	4.8	100.0	311
Income Group								
Low	23.8	49.8	1.2	14.5	5.0	5.7	100.0	420
Medium Low	23.5	46.3	1.5	19.7	5.6	3.3	100.0	395
Medium High	25.4	45.8	3.4	17.5	5.0	2.9	100.0	382
High	29.8	41.3	1.9	14.3	6.3	6.3	100.0	363
TOTAL	25.5	46.0	2.0	16.5	5.4	4.6	100.0	1,560

TABLE 8.2j
 PAYMENT METHOD PREFERENCES: BOBOYE DISTRICT
 DISTRIBUTION (%) OF THE RESPONDENTS WHO PREFERRED THE INDIRECT PAYMENT METHOD
 ACCORDING TO THE REASON WHY THEY PREFERRED THIS METHOD:
 BY SEVERAL SOCIO-ECONOMIC CHARACTERISTICS
 (AMONG THE INDIVIDUALS AGE 15 AND OLDER WHO PREFERRED THE INDIRECT PAYMENT METHOD)

	Reason Why They Preferred the Indirect Payment Method							Number of Respondents
	Less Expensive	Easy to Pay 200F/Yr.	Easy to Pay 50F/Illness	Easy to Pay 200F/Yr. & 50F/Illness	Other Reason	Not Stated	Total	
Time by Foot to the Nearest Public Health Facility								
< 1 hr.	56.2	22.0	8.1	7.1	5.6	1.0	100.0	395
[1, 2)	57.3	16.6	9.3	10.1	6.3	.4	100.0	506
[2, 3)	59.6	14.8	10.2	7.2	6.5	1.6	100.0	431
3 hrs. or more	51.6	25.3	4.0	11.8	6.4	.9	100.0	450
Size of Household								
< 5	58.5	19.1	8.2	7.1	7.1		100.0	183
5-7	53.2	19.6	9.9	11.2	5.1	1.1	100.0	547
8-11	56.7	19.2	7.9	8.9	6.1	1.2	100.0	573
12 or more	58.0	20.3	5.6	7.9	7.3	.8	100.0	479
Income Group								
Low	62.2	16.0	8.2	9.2	4.0	.4	100.0	476
Medium Low	57.2	18.5	8.0	8.0	7.0	1.3	100.0	460
Medium High	56.3	16.8	8.4	12.5	5.0	1.0	100.0	416
High	48.4	27.4	7.0	7.0	9.1	1.2	100.0	430
TOTAL	56.2	19.6	7.9	9.1	6.2	1.0	100.0	1,782

TABLE 8.2k
INDIRECT PAYMENT METHOD
PERCENTAGE (%) OF THE RESPONDENTS WHO WERE PREPARED TO PAY MORE THAN 200 CFA F/YR.
AND THE AVERAGE AMOUNT (CFA F) THEY WERE PREPARED TO PAY PER YEAR:
BY SEVERAL SOCIO-DEMOGRAPHIC CHARACTERISTICS AND BY DISTRICT
(AMONG INDIVIDUALS AGE 15 AND OLDER WHO PREFERRED THE INDIRECT PAYMENT METHOD)

	DISTRICT					
	SAY			BOBOYE		
	Prepared to Contribute More than 200 F/Yr. (%)	Avg. Amt. Prepared to Contribute per Year (CFA F) ¹	Number of Respondents	Prepared to Contribute More than 200 F/Yr. (%)	Avg. Amt. Prepared to Contribute per Year (CFA F) ¹	Number of Respondents
Age in Years						
< 18	66.9	272.6	157	51.4	244.9	216
18-24	71.7	284.9	286	46.6	246.8	305
25-34	76.9	322.3	347	36.7	244.1	422
35-44	72.5	295.7	291	42.3	259.0	319
45-54	73.3	277.7	240	40.6	245.7	261
55 +	69.5	275.7	239	34.7	243.4	259
Sex						
Male	75.5	302.6	738	48.3	258.6	804
Female	69.7	281.5	822	35.9	238.3	978
Ethnic Group						
DJERMA	77.2	301.3	338	41.8	246.3	1,366
HAUSA	87.5	328.9	96	63.2	271.8	76
FULANI	71.6	290.1	587	32.8	235.2	268
OTHERS	67.7	280.1	539	44.4	289.9	72
Strata						
With Pub. Health Fac.	73.8	293.5	210	45.3	255.3	274
Without Pub. Health Fac.	72.2	291.2	1,350	40.8	246.0	1,508
TOTAL	72.4	291.5	1,560	41.5	247.5	1,782

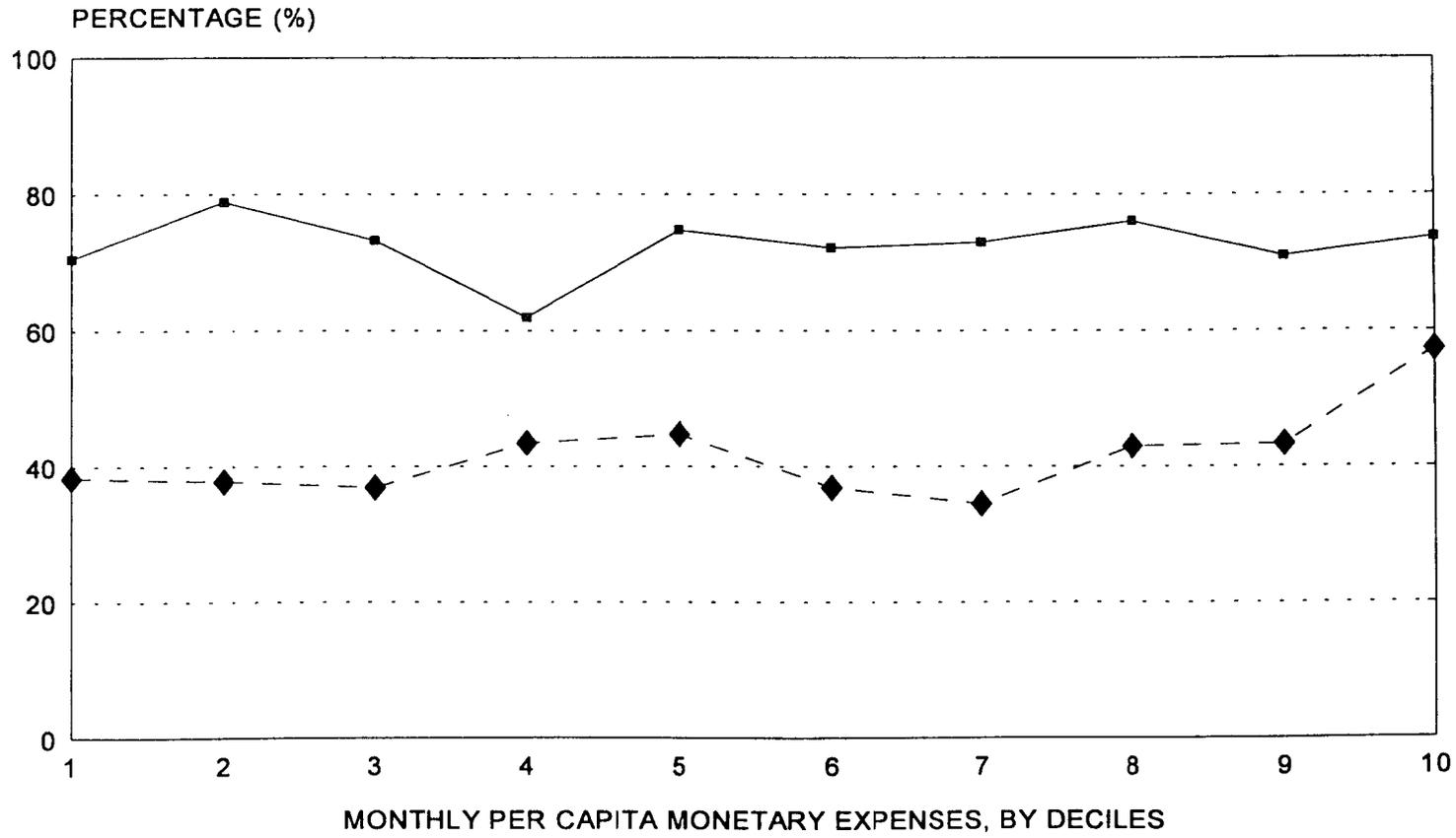
¹ Working hypothesis: it is assumed that the respondents who chose the yearly contribution of 200 CFA F were prepared to contribute at least 200 CFA F.

TABLE 8.21
INDIRECT PAYMENT METHOD
PERCENTAGE (%) OF THE RESPONDENTS WHO WERE PREPARED TO PAY MORE THAN 200 CFA F/YR.
AND THE AVERAGE AMOUNT (CFA F) THEY WERE PREPARED TO PAY A YEAR:
BY SEVERAL SOCIO-DEMOGRAPHIC CHARACTERISTICS AND BY DISTRICT
(AMONG INDIVIDUALS AGE 15 AND OLDER WHO PREFERRED THE INDIRECT PAYMENT METHOD)

	DISTRICT					
	SAY			BOBOYE		
	Prepared to Contribute More than 200 F/Yr. (%)	Avg. Amt. Prepared to Contribute per Year (CFA F) ¹	Number of Respondents	Prepared to Contribute More than 200 F/Yr. (%)	Avg. Amt. Prepared to Contribute per Year (CFA F) ¹	Number of Respondents
Time by Foot to the Nearest Public Health Facility						
< 1 hr.	70.3	287.8	259	45.8	252.0	395
[1, 2)	73.9	307.4	436	39.1	246.9	506
[2, 3)	75.0	300.1	328	41.1	249.9	431
3 hrs. or more	70.8	275.1	537	40.7	241.8	450
Size of Household						
< 5	72.6	281.1	288	40.4	239.6	183
5-7	72.0	291.2	496	43.0	249.5	547
8-11	72.5	308.5	465	40.7	245.8	573
12 or more	73.0	276.2	311	41.1	250.2	479
Income Group						
Low	74.0	266.5	420	38.0	232.8	476
Medium Low	69.4	274.6	395	42.4	247.6	460
Medium High	72.5	298.2	382	37.3	239.6	416
High	73.8	331.8	363	48.4	271.2	430
TOTAL	72.4	291.5	1,560	41.5	247.5	1,782

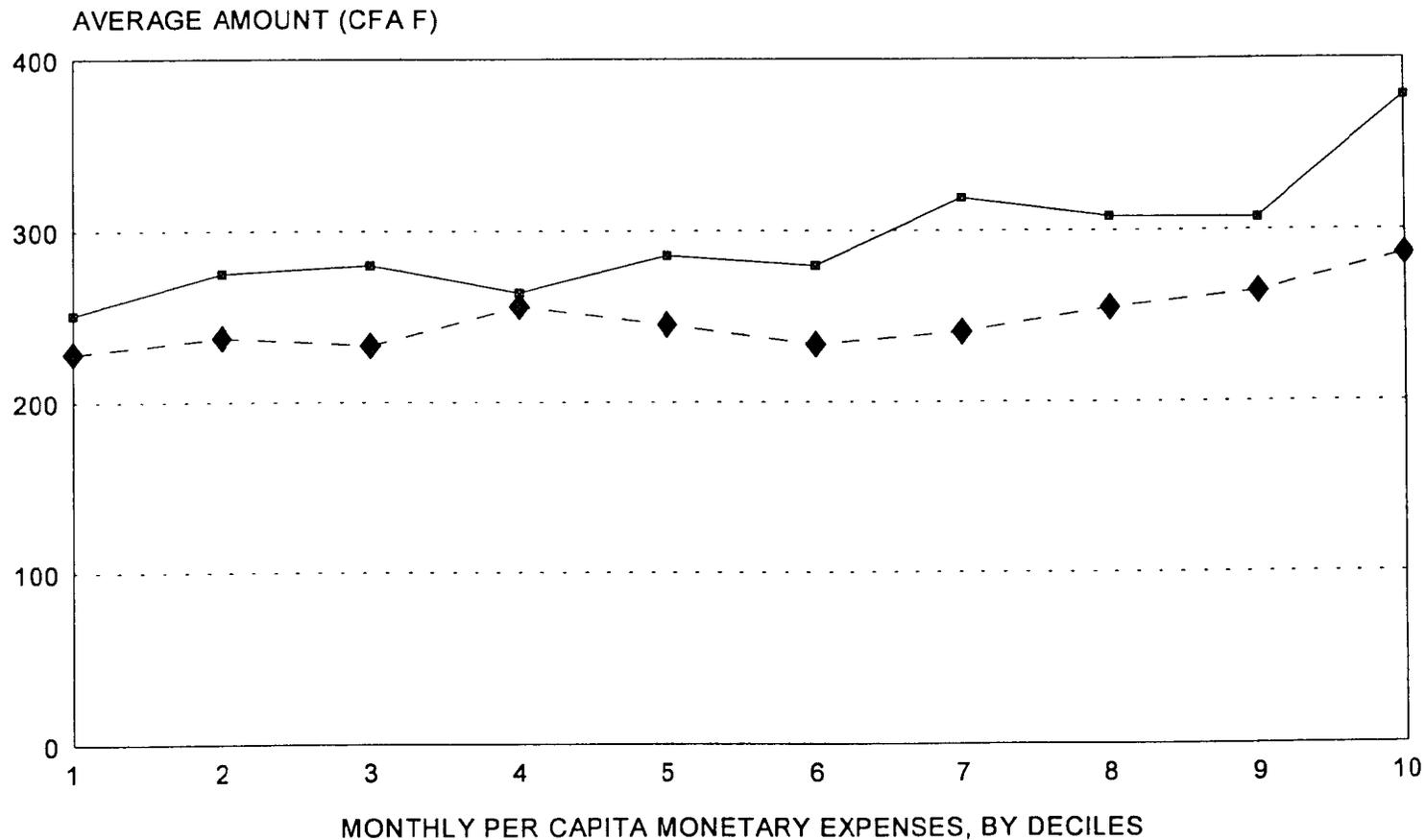
¹ Working hypothesis: it is assumed that the respondents who chose the yearly contribution of 200 CFA F were prepared to contribute at least 200 CFA F.

Graph 8.2c - INDIRECT PAYMENT METHOD
 PERCENTAGE OF INDIVIDUALS WHO STATED THAT THEY WERE PREPARED TO PAY MORE THAN 200 F PER YEAR:
 BY DISTRICT (AMONG INDIVIDUALS AGE 15 AND OLDER WHO PREFERRED THE INDIRECT PAYMENT METHOD)



DISTRICT
 —■— SAY —◆— BOBOYE

Graph 8.2d - INDIRECT PAYMENT METHOD
AVERAGE AMOUNTS (CFA F) THAT INDIVIDUALS STATED THEY WERE PREPARED TO CONTRIBUTE A YEAR:
BY DISTRICT (AMONG INDIVIDUALS AGE 15 AND OLDER WHO PREFERRED THE INDIRECT PAYMENT METHOD)



DISTRICT
—■— SAY —◆— BOBOYE

9.0 CONCLUSION

Since April 1992, the Ministry of Public Health (MSP) has been conducting pilot tests on cost recovery in the non-hospital sector. For these tests, the MSP has received technical assistance from the Health Financing and Sustainability Project (HFS) and the financial support from USAID and the World Bank. The pilot tests were initiated against a political backdrop that was in complete transition. The pilot test process benefitted from this transitional environment, which was characterized by innovation, at least politically. Economically, however, the pilot tests were implemented at a time when budget constraints were rather stringent. This, in turn, forced the health care system to operate at a level well below its capabilities. In this respect, the level of care provided in the Boboye and Say districts, which was achieved through the pilot test interventions, was an exception to the status of the health care system in the rest of the country.

The pilot tests on cost recovery in the non-hospital sector were structured around the public health facilities. The tests consist of three main structural components: 1) enhancing the capabilities of the health facilities by training care providers in diagnostic and treatment protocols and stocking initial supplies of generic essential medicines, 2) enhancing the financial management capabilities and the management of medical supplies, and 3) instituting payment for care at the public health facilities. The first two components were implemented in a similar manner in the Boboye and Say test districts. In terms of payment for health care, a direct payment method was tested in the Say district, and an indirect payment method was tested in the Boboye district. No pilot test interventions were conducted in the Illéla district. Thus, this district represents the alternative of continuing the current policy, that is, the status quo in the rest of the country.

The instruments for evaluating the pilot tests involve two components. The first component consists of two household surveys—a baseline survey conducted from October to December 1992, before cost recovery began, and a final survey conducted from October to December 1993, six months after the start of the tests. The second component consists of the collection of data from public health facilities to assess their activities, the use of medicines, the receipts from cost recovery, and the incremental administrative costs resulting from cost recovery.

The immediate objectives of the household surveys were to: 1) to provide information on the use of health facilities by those who were ill, 2) provide information on the amounts expended for health care, including the amounts for medicines, consultations and tests, and travel, and 3) collect information to compare the demand for health care by households and individuals under the two payment methods tested during the pilot tests on cost recovery. The areas covered by the household surveys involved, two districts where the payment methods for cost recovery were being tested: the Boboye district in the Dosso province and the Say district in the Tillabéri province and, the Illéla district in the Tahoua province, as the control.

During the final survey, 13,000 persons were surveyed in the three districts, compared to 14,400 persons surveyed during the baseline survey. During the final survey, 2,710 persons completed the interview on curative care out of 2,726 persons who stated that they had been ill during the two weeks preceding the interview. The interview on curative care had been completed by 2,833 persons during the baseline survey. In addition, out of the 4,050 persons who participated in the survey in the Boboye and Say district and were 15 or older, 3,960 completed the interview on payment for care during the final survey.

The objectives of this report are to: 1) show the patterns in the usage of health care six months after payment for care began, and 2) compare the demand for care before and after the start of cost recovery. In this respect, this report is one of several analyses in progress for evaluating the pilot tests. This report concerns itself only with a descriptive analysis of the demand for curative treatment; the implications of the results from the pilot tests on the formulation of policy will be determined by considering the variety of analyses that are being conducted.

The socio-demographic and economic characteristics of the three districts were relatively similar. The households in the three districts were not very different in terms of the demographic characteristics of the heads of the households. The households in the three districts were headed by men in their advanced years, despite evidence of widespread emigration by males. This situation was typical of the three districts despite their different ethnic compositions.

The three districts were not similar in terms of ethnic composition. The population in the Boboye district was predominantly Djerma, while the population in Illéla was mainly Hausa. The population in the Say district, however, was a patchwork of ethnic groups; the Fulani, who are a pastoral people, were the largest group.

The age distribution in the three districts was typical of a population with a high birthrate—more than 50 percent of the population were under 15 years old. The youthfulness of the population was accentuated by a low number of males in the intermediate age groups. Most of the population in the intermediate age groups had never attended a modern school.

Monthly per capita monetary expenses per household were fairly comparable among the three districts. The monthly per capita monetary expenses of the households in the Say district, however, were slightly higher than those in the Boboye and Illéla districts. It appears that within each district, though, the availability of liquid assets among the rural households varied widely.

Within the same district, the same socio-demographic characteristics were observed on both the baseline and final surveys. The estimates of monthly per capita monetary expenses per household were about the same between the baseline and final surveys within the same district.

The rate of self-reported illnesses was comparable among the three districts, between 20 and 25 percent. Like the data from the baseline survey, the data from the final survey indicate that the rate of self-reported illnesses did not vary by socio-demographic or economic factors, other than by age. The variation by age in the rate of self-reported illnesses was consistent with the demographic patterns for morbidity.

The percentage of persons with an illness who reported having had a fever was relatively high in the three districts. The rate of watery stools reported by the respondents, however, was lower in the Say district than in the Boboye and Illéla districts. It was found that the rate of these symptoms did not vary by socio-demographic and economic groups within the same district, with the exception of the rate for watery stools, which was higher among children under age five. The data from the final survey confirm the conclusion from the baseline survey that there was no significant variation in the health needs of the different socio-demographic and economic groups within the three districts. In other words, the determining factor in terms of needs is more geographic and demographic in nature than social or economic.

The tendency to seek some form of treatment for an illness was rather high in the three districts. It was significantly higher in the test districts than in the Illéla control district. The Fulani were notable for their comparatively low tendency to seek treatment. In the Illéla and Say districts, those who were ill and lived close to a public health facility had a higher tendency to seek care than their counterparts who lived in villages far from a health facility. In addition, persons who were ill in the three districts were more likely to seek care if they belonged to the high income groups than if they belonged to the low income groups. As expected, the tendency to seek care increased with the seriousness of the illness.

Data from the baseline survey showed that most of the population in the three districts treated their illnesses at home before the introduction of cost recovery. Care at home mainly involved using medicines available in the home and those purchased for the illness before any visit to a drug provider outside the home. The data from the two surveys indicated that the use of medicines at home before visiting a public health facility was very common in the three districts. The tendency to use medicines at home did not vary by the demographic characteristics of the sick person. This tendency was higher among the higher income groups and in the villages closest to public health facilities before the pilot tests began. This trend continued in the Illéla control district after the tests were instituted. It tended to change in the Boboye and Say districts, though, after the start of the tests. In fact, in the test districts, the tendency to use medicines at home before visiting a health facility was similar among the different income groups and among the villages regardless of their distance from a public health facility.

The two surveys indicate that purchasing medicines to treat an illness before visiting a public health facility was common in the three districts. The tendency to purchase medicines before visiting a public health facility did not vary in relation to the demographic characteristics of the person who was ill. However, this tendency was higher among the highest income groups in the Boboye and Illéla districts, whereas all income groups in the Say district showed the same tendency in purchasing medicines.

The tendency to purchase medicines before visiting a health facility increased in the Boboye and Say test districts compared to the Illéla control district, where the same level was observed before and after the pilot tests were instituted. Within the three districts, however, the tendency to purchase medicines decreased between the two surveys among the villages where public health facilities were located. Outside the villages where the facilities were located, however, the purchase of medicines before visiting a public health facility increased in the test districts.

The main sources for medicines in the three districts, aside from the public health facilities, are the local pharmacies and pharmaceutical depots, the village health workers, and the informal market. For care at home, these were the sources that those with an illness used for buying medicines before visiting a public health facility, if they visited one at all. However, the formal sector of the local medical distribution system experienced difficulties replenishing its supplies as a result of nationwide interruptions in the supplies of essential medicines during 1993. In the Boboye and Say test districts, the diminishing role of the local pharmacies and pharmaceutical depots was exacerbated by the initial supplies of medicines provided to public health facilities for the pilot tests project on cost recovery.

Between the baseline and final surveys, the percentage of ill persons who bought their medicines from the pharmaceutical depots decreased by more than half in the three districts. The extent of this decrease in the Illéla control district indicates that it was not entirely related to the introduction of cost recovery in the test districts. In fact, the market share lost by the pharmaceutical depots in the Illéla control district was gained by the informal market. The Say district showed a similar trend. By contrast, in the Boboye test district, the market share lost by the district's pharmaceutical depots was gained by the village health workers. The increased role of the informal market as a source for purchasing medicines before visiting a given health facility in the Illéla control district, and to a lesser extent in the Say district, affected all socio-economic groups equally regardless of their level of income or their distance from a public health facility.

The data from the households surveys support the data from the health facilities. On average, the percentage of persons with an illness who used the public health facilities increased in the Boboye district; in the Say district, use decreased slightly; and in the Illéla district, use decreased during the test period. In the Say test district, the net effect that resulted from a greater availability of medicines and from payment at public health facilities offset the decrease observed in the Illéla control district. A comparison between the Boboye district and Say district suggests that the direct payment of 200 FCFA in Say served as a deterrent in the use of the public health facilities among certain segments of the population.

The decline in the use of public health facilities in the Illéla control district affected all the demographic groups equally. In the Say test district, the same levels of use were observed between the baseline and final surveys for women and children. In the Boboye test district, women and children under age five increased their use of public health facilities by 32 percent.

The use of public health facilities was more affected by the time required to reach the health facilities than by the payment method and fees charged to use the facilities' services. In fact, the most striking trend in all three districts was the sharp decline in the use of public health facilities by those who lived more than an hour away by foot. The same pattern was seen in both the baseline and final surveys. The variations in the use of facilities within each of the three districts according to the distance from the facilities was significantly more pronounced than either the differences in use among the three districts or the differences observed between the baseline and final surveys within a given district.

In the Illéla control district, those who lived near public health facilities decreased their use of them. The level of use by those who lived more than an hour by foot from a public health facility remained at the very low levels observed before the tests began. In the Say test district, the use of public health facilities by ill persons who lived less than an hour by foot decreased slightly from the high level of 45 percent before payment for care was instituted to 37 percent after payment for care began. Among the ill who lived more than an hour by foot from a public health facility, use increased slightly between the baseline and final surveys. These findings suggest that the payment of 200 FCFA at the health facilities improved the efficiency of the use of health facilities among those who lived in villages where facilities were located. Furthermore, the attractiveness of the increased availability of medicines at the public health facilities had a greater effect on the use of health facilities among residents of villages far from a facility than did the deterrent of paying for health care.

In the Boboye test district, the use of public health facilities by ill persons who lived less than an hour by foot from a facility increased by 21 percent. Among those who lived between one and three hours by foot from the public health facilities, use of the facilities increased by about 42 percent. Among those who lived more than three hours by foot from a public health facility, use remained at the low levels observed before the tests were instituted. The 50 FCFA co-payment per illness under the indirect payment method used in the Boboye district did not seem able to reduce the use of public health facilities among those who lived in villages close to the public health facilities. Despite the increased use of health facilities by those who lived more than an hour by foot, the time required by foot to reach a public health facility serves as a means of rationing health care and thus puts villages that are far from the health facilities at a disadvantage.

The decreased use of public health facilities in the Illéla control district between the baseline and final surveys was distributed equally across all income groups. In the Say district, the use of the facilities decreased between the baseline and final surveys among ill persons who were in the 25 percent of households with the highest income. A similar decrease was noted among the ill who belonged to the 25 percent of households with the lowest income. Among the intermediate income groups, however, use increased substantially between the two surveys. In the Boboye district, use of public health facilities remained the same during the baseline and final surveys among persons in the intermediate income groups. Use increased significantly between the baseline and final survey, however, among those in the highest income groups. Among people belonging to the 25 percent of households with the lowest income, the use of public health facilities doubled between the baseline and final surveys.

There was no change in the continuity of care in the Illéla control district before and after the pilot tests were instituted. In the Boboye and Say test districts, the continuity of patient management at the public health facilities increased markedly. The change in the perception of patients at public health facilities regarding the availability of medicines at the facilities is consistent with the changes in the percentage of patients who were given prescriptions by care providers between the baseline and final surveys. Unlike the Illéla control district, care providers in the Boboye and Say test districts prescribed medicines less often after the tests were instituted. It is not surprising, then, that patient management and the continuity of care improved markedly in the Boboye and Say test districts compared to the Illéla control district.

Data from the surveys indicate that patients of the public health facilities in the Boboye and Say test districts are adhering to the payment systems. More than 70 percent of the patients in the Boboye and Say test districts stated that they had paid. The paradox of paying for health care under a system of free care continued in the Illéla control district—a large percentage of patients at the public health facilities continued to pay to ensure treatment. Forty-two (42) percent of the patients stated that they had made some form of payment for treatment.

During the two weeks preceding the interview, almost all ill persons who took measures to treat their illness either treated it at home or visited a public health facility. Thus, illness-related expenses involved either care at home or visits to the public health facilities. On the final survey, persons with an illness in Illéla control district spent an average of 250 FCFA to treat their illness. In the Say test district, persons with an illness spent an average of 210 FCFA, and in the Boboye test district, ill persons spent an average of 230 FCFA. The most notable difference between the Illéla control district and the tests districts was the different distribution of illness-related expenses. In the Illéla control district, expenses related to the use of public health facilities accounted for 64 percent of the illness-related expenses. In the test districts, however, about 70 percent of illness-related expenses were for care at home, including the purchase of medicines before visiting a public health facility.

Illness-related expenses in the three districts decreased between the baseline and final surveys. A large part of this decrease was related to the decline in the three districts in the percentage of ill persons who bought medicines from a pharmacy before visiting a public health facility. This decrease in illness-related expenses in the Illéla control district was compounded by the decreased use of the district's public health facilities for curative care. In the Illéla control district, the decrease in illness-related expenses was observed only among those who lived less than two hours by foot from a public health facility. In the Say test district, illness-related expenses decreased dramatically in the villages located less than an hour by foot from a public health facility. The pilot tests were first implemented in these villages. In the Boboye test district, illness-related expenses decreased only in villages located less than two hours by foot from a public health facility. Illness-related expenses among those who lived farther than two hours by foot from a public health facilities remained the same between the baseline and final surveys.

In the Illéla control district, the decrease in illness-related expenses affected all income groups equally. In the Boboye and Say test districts, however, a decrease in illness-related expenses was observed only among persons who belonged to households in the upper 50 percent income group.

The three districts exhibited different rates of change between the baseline and final surveys in the expenses incurred during the two weeks preceding the interview by patients at public health facilities. In the Illéla control district, these expenses remained at almost the same level between the baseline and final surveys (1,700 FCFA and 1,800 FCFA, respectively). In the Say test district, the expenses incurred by patients at the facilities decreased from 1,040 FCFA on the baseline survey to 610 FCFA in the final survey—a decrease of 41 percent. In the Boboye test district, the expenses incurred by patients at the public health facilities decreased from 1,030 FCFA on the baseline survey to 540 FCFA on the final survey—a decrease of 48 percent.

In the three districts, the expenses of patients who lived less than two hours by foot from a public health facility decreased between the baseline and final surveys. In the Illéla control district, the decrease was mainly due to lower spending for medicines at pharmaceutical depots before any visit to a health facility. In fact, expenses for treatment at the health facilities increased between the two periods. In the two test districts of Say and Boboye, the decrease was related to a decline in expenditures for health care at the health facilities. The decline was comparatively larger in the Boboye test district because of a reduction in expenditures for medicines before visiting a health facility. In the Say test district, however, these expenses for medicines remained at the same level.

In the Illéla control district, illness-related expenses increased between the baseline and final surveys among patients who lived more than two hours by foot from a public health facility. These expenses decreased, however, in the Say and Boboye test districts. As is the case for the villages located near the health facilities, the decrease for the villages far from a health facility was comparatively larger in the Boboye district than in the Say district because of lower expenses for medicines before having visited a health facility. These expenses for medicines remained at the same level in the Say district.

The difference in results between the Say and Boboye test districts suggests that the purchase of medicines is very much affected by the fees charged at public health facilities. The price of medicines from the informal market remained relatively low, as a result of flexibility in packaging and lower prices from suppliers. As a result, the higher the fee charged at the health facilities, the less it deters those with an illness from purchasing medicines in the informal market.

In the Illéla control district, the expenses incurred for care at home by the patients at public health facilities decreased among the low and high income groups. However, while the expenses incurred for care at the public health facilities increased by only 38 percent between the baseline and final surveys among patients from the poorest households, these expenses increased by more than 100 percent among the patients from the wealthiest households. In the Say test district, the decrease in illness-related expenses among patients at public health facilities was only observed among the patients from the wealthiest households. In fact, the expenses incurred by the patients from the poorest households increased by 82 percent between the baseline and final surveys. At the other end of the scale, the expenses incurred by the patients from the wealthiest households decreased by 44 percent between the baseline and final surveys. This decrease was mainly due to lower expenses for treatment at public health facilities, which decreased an average of 70 percent. In the Boboye test district, the decrease in illness-related expenses among patients at the facilities was observed among all the income groups. Expenses decreased by 64 percent between the baseline and final surveys among patients from the lowest income groups and 42 percent among those from the highest income groups.

The impact of illness-related expenses on household monetary expenses remained approximately the same between the baseline and final surveys among households in the Illéla control district. In the Say test district, where the direct payment method was used, the impact of illness-related expenses remained the same between the baseline and final surveys for the 40 percent of households with the lowest income. Among the intermediate income groups, the impact of illness-related expenses increased between the baseline and final surveys, while among the 30 percent of households with the highest income, the impact of illness-related expenses decreased. In the Boboye test district, where the indirect payment method was used, the impact of direct expenses related to illness decreased between the baseline and final surveys with the exception of the 20 percent of households with the lowest income. It was noted, however, that in the Boboye district, the tax surcharge for all individuals age 18 and older had a greater impact as household income decreased. This finding raises the issue of exempting the poor from the district tax surcharge for financing medicines at the local level.

Based on the statements from the individuals age 15 and older in the two test districts of Boboye and Say, the willingness to pay at public health facilities to ensure that medicines are available at those facilities was very high. The percentage of individuals age 15 and older who stated that they were prepared to pay all the time to ensure the availability of medicines at the health facilities was about 90 percent in the two test districts of Say and Boboye. In the Say test district, about 66 percent of the individuals age 15 and older stated that they were prepared to pay more than the current fee of 200 FCFA per illness. In the Boboye test district, about 62 percent of the individuals age 15 and older stated that they were prepared to pay more than the current co-payment fee of 50 FCFA per illness. The amounts that the individuals in the two districts stated they were prepared to pay, however, indicate that there would be more flexibility in the co-payment fee structure under the indirect payment system used in the Boboye district than in the fee structure under the direct payment system used in the Say district.

In the two test districts of Boboye and Say, almost all of the individuals age 15 and older stated that they preferred the indirect payment method over the direct payment method. About 84 percent of the respondents in the two test districts of Boboye and Say stated that they preferred the indirect payment method, while six to eight percent preferred the direct payment method. Within each district, these preferences in payment method varied very little among the various socio-demographic and economic groups. The reasons given by the respondents for not preferring the direct payment method and for preferring the indirect payment method were consistent with the economic considerations of a rural population where disease is widespread, household monetary income is low, and the availability of cash varies with the season. Most of the respondents stated that they did not prefer the direct payment method because they could not afford it or because they found it difficult to come up with 200 FCFA for each illness. By contrast, they preferred the indirect payment method because they found that it was less expensive or because they thought it would be easy to come up with 200 FCFA a year.

The attitudes of the respondents concerning the amount of the annual contribution were more affected by the type of payment method they had experienced during the tests than by socio-demographic or economic characteristics of the individuals or their households. The percentage of respondents who stated that they were prepared to contribute more than 200 FCFA a year was higher in the Say test district, where the patients paid 200 FCFA per illness, than in the Boboye test district, where the indirect payment method was tested.