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THE PROVISIONAL MILITARY GOVERNMENT
OF SOCIALIST ETHIOPIA
OFFICE OF NATIONAL COMMITTEE
FOR CENTRAL PLANNING
CENTRAL STATISTICAL OFFICE

REPORT ON THE RURAL HEALTH SURVEY (1982/83)

VOLUME I

ADDIS ABABA
OCTOBER 1985

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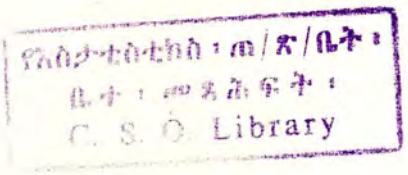
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P R E F A C E

Concern for the health of the masses, by most countries, especially less developed countries, has grown significantly since the Alma-Ata (in USSR) declaration on Primary Health Care in 1978. The International Conference on Primary Health Care, at Alma-Ata, endorsed the affirmation of the Thirtieth World Health Assembly, in May 1977, that the attainment of a higher quality of life by all the peoples of the world by the year 2000 is the goal towards which all governments should strive for in the ensuing decades. From the aspect of health, this means governments of the world should work to attain the goal of a level of health, for all the peoples of the world, that will enable them to lead socially and economically productive life. Thus the Alma-Ata conference recognized that health is a human right to be enjoyed by all and recommended "Primary Health Care" (PHC) as the approach for achieving an acceptable level of Health for all by the year 2000 (HFA/2000).

Ethiopia has committed itself to HFA/2000 as recommended by the Alma-Ata Conference by signing the "Charter for the Health Development of the African Region by the year 2000" as well as practically launching a "Primary Health Care Program", which has already started catering to the basic health needs of the masses, in the country soon after the Alma-Ata conference. It is therefore appropriate to collect and compile population based data on the health of the masses. The 1982/83 Rural Health Survey, as the first of its kind, may be considered as a base line survey for some aspects of the Primary Health Care. Not only that, but also in enabling collection and compilation of data on the health conditions (morbidity) of the population, treatment practices, and availability of sanitary facilities and practices of the rural population its results will be

useful for rural health planning both at the PHC program level and higher health service programs levels as well as serve as a basis for evaluating levels of plan implementation.

CENTRAL STATISTICAL OFFICE

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1 - INTRODUCTION

In the health and health - related area of statistics the Central Statistical Office (CSO) has carried out two rounds of a rural health survey and three rounds of a rural nutrition survey in 1982/83 using lay interviewers. Data collection was undertaken during end of August to early September 1982 and late January 1983 in the case of the first and second rounds of the Health Survey, respectively and mid September 1982, end of January to early February and early July 1983 in the case of the three rounds of the Nutrition Survey, respectively. These surveys are the first of their kind in the country in that they were carried out by lay interviewers and they were all of large scale, each round of each survey covering about 13,000 households. It was found necessary to undertake two rounds of each survey in order to collect data at two points of time of the year when prevalence of diseases and availability of food in the country is considered to be high and low. A third round was carried out in the case of the nutrition survey because anthropometric measurements of young children were not taken during the first round due to failure of measuring equipments to arrive from abroad in the expected time and was considered important to take a third round to compensate for this failure in the first round. These surveys were carried out as part of a Rural Integrated Household Survey Program (RIHSP) which was initiated in 1980 by the CSO. The RIHSP is the major part of two components of a National Integrated Household Survey Program (NIHSP) the other component, namely the one designed to cover the urban areas not as yet having materialized due to limitation of resources.

The NIHSP, developed within the framework of the African Household Survey Capability Program (AHSCP) which was endorsed by the 9th conference of African Statisticians in October 1975 and which in turn is part of the United Nations Household Survey Capability Program (UN/NHSCP) has been designed by the CSO, as a program of continual data collection from households in various

subjects. Development of NIHSP was necessitated by obvious paucity of reliable data in most subjects in the country. The fundamental social and political changes that have been taking place, especially during the last 10 or so years, required fast socio-economic development whose achievement in turn, has necessitated vigorous centrally planned socio-economic management. This heightened the need for reliable data in almost all fields; hence the conception and birth of tne RIHSP. The Health and Nutrition Surveys, as part of RIHSP, were therefore designed to fill data gaps in the health and health-related areas.

This document is the first volume of the report on the 1982/83 Health Survey and treats almost all aspects and phases of the survey for twelve regions. The report includes the following 10 major sections: objectives of the survey, scope of the survey, development of questionnaire and interviewers' instruction manual, survey methodology, training of field staff, field organization and survey operations, survey results, comments on the survey results, conclusions and a section on " pretesting the survey " as an appendix. As already hinted above the results presented in this volume refer to summaries for the twelve regions, while detailed results at the regional level will be presented in a second volume.

Last, but not least, it should be mentioned that the United Nations Children's Fund (UNICEF) and the Food and Agriculture Organization (FAO) have supported the RIHSP and hence the Health Survey materially. Also the World Health Organization (WHO) has sent one of its health statisticians to Addis Ababa on short term visits to assess the Health and Nutrition Surveys operations.

2 - OBJECTIVES OF THE SURVEY

The main objective of this survey is to collect data that would serve as basis for planning strategies for health projects in the different regions of the country and also for monitoring and evaluating different health programs designed to improve the health status of the population.

The specific objectives of the survey are as follows:-

a) To collect data that will show the types and distribution of diseases and injuries in different regions of the country.

b) To collect data that will throw light on where people seek treatment from or what people do when they are ill.

c) To collect data that will throw light on the attitudes of the population towards modern health institution as well as health practices of the population.

d) To collect data on the extent of availability of basic sanitary facilities to households and on sanitary practices followed.

e) To collect data on what type of midwifery services mothers use during child birth.

In formulating the above mentioned objectives the following factors were carefully considered:

a) Material resources that could be available to the carrying out of the survey;

b) Human resources that could be available for deployment to carry out the survey;

c) The fact that the CSO had limited experience in collecting and compiling population based health and health - related data;

d) The respondents: the types of data that the respondents could provide, the types of questions, queries and probes the respondents could respond to satisfactorily.

3 - SCOPE OF THE SURVEY

The scope of the survey is limited to collecting data on morbidity, injury, treatment, midwifery services, hygiene, sanitation and basic socio-demographic characterstics but excluding mortality. The major items included in the health questionnaire are:- sex, age,. illnesses, duration of illness(es)

and days lost from usual activity due to illness(es), injury, duration of injury, days lost from usual activity due to injury, external cause of injury, sources of treatment, reason for not seeking treatment in any medical institution or from a community health agent, place of usual defecation (with a euphomism for the word defecate in the Amharic version), midwifery services used by mothers, religion, ethnic group, marital status, literacy, highest grade completed, source of water supply, availability of protected water, refuse disposal and latrine and whether domestic animals spend nights in rooms with members of households.

It may be usefull to add here that the possible responses from household members to the items on external cause of injury, reason for not having been treated in a modern medical institution or by a community health agent, place of defecation, midwifery services, religion, marital status, literacy status, educational attainment and the five last items on availability of hygienic facilities to households have all been precoded. For further detail refer to a copy of the questionnaire in the appendix.

4 - DEVELOPMENT OF QUESTIONNAIRE AND INTERVIEWERS' INSTRUCTION MANUAL

Once the decision to carry out a Health Survey, using lay interviewers, was made, the objectives of the survey specified and survey dates tentatively fixed steps to develop the necessary questionnaire and interviewers' instruction manual soon followed. The CSO approached the Statistics Division of the Ministry of Health and the Department of community Health, Faculty of Medicine, Addis Ababa University, to participate in the Survey. The active cooperation of these two organizations was believed to be necessary for at least two important reasons:

a) being the two most important users of data that would be obtained through such a survey their suggestions as to what should be collected were considered of paramount importance;

b) the statistics division of the Ministry of Health, having been for long the most important health data collector and compiler from health services in the country and the department of community health being the sole body in the country involved in community health research and study, it was felt both would have useful contributions to make as a result of their experience and expertise.

Copies of the first draft questionnaire and instruction manual, whose preparation was soon completed at the CSO, were distributed to all concerned and discussions and consultations continued until the second draft questionnaire and instruction manual were prepared in Amharic (the official language) at the CSO. These were final drafts for the pretest.

Of central importance in the Health Survey design was the collection of data on morbidity in the rural areas of the country. Since the data collectors were lay interviewers it was necessary to limit the scope of the survey to collecting data pertaining to the prevalences of a limited number of illnesses considered of major health concern to the country and at the same time capable of being indentified by lay interviewers. A list of 21 diseases under 5 groups for persons aged 5 years and above and a group consisting of 11 diseases for children under the age of 5 years plus a category of unidentifiable health problems in each disease group considered pertinent to the rural Ethiopian conditions was thus adopted from the World Health Organization publication entitled:

LAY REPORTING OF HEALTH INFORMATION (Geneva, 1978) and their symptoms specified in the instruction manual as clearly as possible. As the survey also included collection of data on basic sanitation and hygiene, concepts of "Protected Water , Latrine, Refuse Disposal" pertinent to the Rural Ethiopian conditions were taken from the Ministry of Health.

Then the questionnaire, the instruction manual and training and data collection procedures were pretested in a rural setting in a Farmers' Asspciation by the name of Wayu Gebriel,

Dugda Wereda, Hikoch and Butajira awraja, Shoa administrative region about 160 km. South - South - East of Addis Ababa (the capital). The pretest led to many important improvements of the questionnaire, the instruction manual and training and data collection procedures all of which were incorporated into the final copies and activities.

It may be noted that the list of diseases selected for identification underwent substantial modification both of specific diseases and disease groups and the final list consisted of 26 specific diseases distributed among eight groups plus a category of unidentified health problems in each of the eight groups and the special group for children under 5 years age was discarded.

The final draft questionnaire and instruction manual were prepared, in Amharic and submitted to the Technical Committee of the CSO for final improvements and approval. Then the final questionnaire and instruction manual were designed and prepared and enough copies for training and data collection printed.

5 - SURVEY METHODOLOGY

The Geographical Coverage, the Sample Design and the Method of Data Collection and Reference Period used in the Health Survey are each briefly treated below.

5.1 - Geographical Coverage

The country is divided into 14 "regions" (the major administrative divisions) and Aseb administration. Each region is divided into a number of "awrajas" (major subdivision of the region) and there are 102 awrajas in the country. Each awraja in turn is divided into a number of "weredas", the total number of weredas in the country being about 600. Finally within each wereda are a number of "Farmers' Associations" in the rural areas and one or more towns, each of which is divided into a number of "Urban Dwellers' Associations" which may be of one or two or three stages (i.e. from the smallest to the largest: Kebele,

Keftegna and Ketena).

The Health Survey covered the rural parts of only 12 regions, the two northmost regions (namely Eritrea and Tigrai) and Aseb administration having been excluded. Furthermore, the nomadic populations in the 12 regions, estimated to be 8% - 10% of the total population, were also not covered.

5.2 - Sample Design

The geographic and administrative divisions of the country formed the first level of stratification for the actual selection of the sample. The awrajas were adopted as the first level stratification and thus 77 strata were formed from the 12 regions. The Farmers' Associations (FA's) were used as the Primary Sampling Units (PSU's) within each strata. It was decided to select a total of 500 PSU'S (i.e. FA's), their allocation to the different regions being determined mainly by the sizes of the regions with the additional requirement of selecting at least 34 PSU's from any region. 34 PSU's were considered a reasonable minimum sample size to provide reliable estimates at the regional level. The number of PSU's in each region were then allocated to the awrajas in the region in such a way that the number of PSU's in each awraja is proportional to the number of FA's in that awraja. The number of awrajas, weredas and FA's selected for the Health Survey in each region is shown in Table 1 below.

Finally, a list of all households, distinguishing between agricultural[1] and non-agricultural was prepared in each selected FA and a random selection of 25 agricultural households and 1 - 5 of non-agricultural households was made from this list for each round of the Health Survey. Thus a sample of 25 - 30 households were selected in each of the 500 selected FA's for the Health Survey. The number of selected non-agricultural households in any FA could be less than 5 or even zero if the total number of listed non-agricultural households in the FA is less than 5 or zero. However, it should be noted here that, due

TABLE 1 - NUMBERS OF SELECTED AWRAJAS, WEREDAS AND FA's IN EACH REGION
(HEALTH SURVEY BOTH ROUNDS)

Region	Number of Awrajas		Number of Weredas		Number of FA's	
	Total in Region	Covered by the RIHSP	Total in Region	Covered by the RIHSP	Total in Region	Covered by the RIHSP
Arssi	3	3	22	21	1,053	34
Bale	5	3	25	10	303	34
Gamo Gofa	4	4	22	21	774	34
Gojjam	7	7	35	35	1,784	36
Gonder	7	7	29	21	1,317	36
Hararge	13	8	63	36	1,473	35
Illubabor	5	5	34	30	910	35
Kefa	6	5	38	27	1,434	35
Shoa	11	11	105	102	5,342	100
Sidamo	6	6	34	31	1,554	35
Wellega	6	6	50	49	2,007	49
Wollo	12	12	37	36	1,038	37
Total	85	77	494	419	18,989	500

to a variety of reasons, both rounds of the Health Survey actually covered a little less than the total number of selected FA's and households as shown in Table 2 below.

TABLE 2 - NUMBERS OF FARMERS' ASSOCIATIONS, HOUSEHOLDS AND PERSONS ACTUALLY COVERED DURING THE FIRST AND SECOND ROUNDS OF THE HEALTH SURVEY BY REGION

Region	First Round			Second Round		
	Number of FA's	Number of House-holds	Number of Persons	Number of FA's	Number of House-holds	Number of Persons
Arssi	34	921	4545	34	924	4553
Bale	32	931	4303	32	901	4149
Gamo Gofa	31	872	3894	29	801	3638
Gojjam	35	987	4123	36	988	4256
Gonder	36	1073	5063	35	1016	4713
Hararge	33	923	4218	33	914	4158
Illubabor	33	904	3884	32	860	3727
Kefa	35	940	4104	35	940	4086
Shoa	94	2498	11106	94	2479	11047
Sidamo	32	868	3964	32	842	3889
Wellega	48	1376	6439	48	1363	6411
Wollo	36	963	4076	36	954	3988
Total	479	13256	59719	476	12982	58615

5.3 - Method of Data Collection and Reference Period

Almost all data for the Health Survey were collected by interviewing heads and other members of households in the sample. Lay persons with educational background of at least grade 12 or equivalent were recruited and trained on how to collect the data. A few items like availability of latrine, refuse disposal, etc. were to be verified through observation as well.

The reference period for the morbidity and treatment part of the questionnaire was the 14 days preceding the day of interview, for the midwifery service part of the questionnaire, the two years preceding the day of interview and for the availability of sanitary facilities and practices, the usual conditions.

6 - TRAINING OF FIELD STAFF

The training program of interviewers, supervisors and other field staff was given at two stages, the first stage at the premises of C.S.O to selected staff members, who were to train the interviewers at the second stage in the regional capitals. It may be noted here that the minimum required academic qualification for interviewers was completion of high school (grade 12). Training, at the first stage, for the Health Survey was given to selected supervisors, regional statistical officers, selected head office professional and subprofessional employees and 12 selected practicing health officers,[2] one from each of the twelve regions.

The training at the head office which lasted for 4 days consisted mainly of explaining how to complete the questionnaire, with individual practices through mock interview and actual interview of households. There was adequate discussion both at the end of the mock interview session and after the field practice where each participant interviewed at least three households. During the field practice, special emphasis was placed on the morbidity aspect. The trainers as well as the 12 health

officers were on hand to observe and note any points on interviewing techniques used by the trainees. For this purpose all the participants were divided into 10 teams of 4 individuals, (including a health officer,) each most of the time and each team interviewed 3 or more households. During the process of interviewing any single household only one enumerator interviewed with the rest only helping when necessary, but every body completed the questionnaire.

As participants in this part of the training were going to be trainers at the second stage, they were given advice before they were deployed to their respective regions, to conduct the second stage of the training in a similar manner, with the exception that the field interviewing practice should be made in rural setting.

The second stage of the training was undertaken, by a team of trainers which included at least a regional statistical officer, and a professional or subprofessional from the head office as well as a health officer. Most of the trainers of the second stage of the training did manage to approximately duplicate the first with the improvement of giving written examinations to trainees and undertaking the field practice in rural setting.

7 - FIELD ORGANIZATION AND SURVEY OPERATION

An interviewer has been stationed in each of the sample FA's (PSU's) since the beginning of the RIHSP in 1980. In addition, there were a few reserve interviewers distributed among some of the regional offices. Thus the total number of interviewers used in the Health Survey was 485. The interviewers leave their FA's only when there is a need, such as participating in a training for a new series of surveys. The data collection activities of the interviewers were supervised by a total of 83 assistant field supervisors, whose head quarters were mostly at awraja capitals. Then, in each region, there is a regional

statistical officer, who was responsible for all survey operations in his respective region. A total of about 44 four wheel drive vehicles and 40 motor bicycles were distributed among the 12 regions to meet the transportation needs of supervision.

As mentioned earlier the Health Survey was undertaken in two rounds and salient activities of the field operation in each of the rounds are given below:-

a) First Round

As the first round of the Health Survey was carried out during the rainy season, despite heavy rains and floods, the deployment of the field staff and the ensuing data collection work, which took 4-6 days, went on quite smoothly as scheduled. A number of field trips were made by regional statistical officers from the different regional capitals and most field supervisors did considerable supervision and control during this round. The following steps were taken between rounds 1 and 2 of the Health Survey in an effort to use the experiences gained from the data collection of round 1 to improve that of the second round:-

i) The completed questionnaires were collected to the head office as soon as data collection work of the first round was completed and most of them were carefully examined to see what serious errors were made in data collection. This exercise had two purposes: firstly to assess the results of the first round and secondly to take necessary steps to prevent repetition of similar errors during the second round. Indeed a number of errors were found in completing the questionnaire in the first round. Many of these errors could be corrected by editing at the head office; but quite a few of them were difficult to correct. The main

sources of these errors were (1) carelessness (2) failure to maintain consistency (3) failure to study carefully and understand the instructions. Based on observed errors a document entitled "ADDITIONAL INSTRUCTIONS FOR NUTRITION AND HEALTH SURVEYS" which explained and discussed all serious errors made during the data collection of the first round of the Health Survey was prepared and copies sent to all members of the field staff well before the beginning of the second round.

ii) To avoid problems of matching and transfer of data in the second round the questionnaire was modified by adding 5 socio-demographic items to it, namely: Religion, Ethnic Group, Marital Status, Literacy and Highest Grade Completed. These items were included only in the Nutrition Questionnaire during the first round.

b) Second Round

Data collection work during the second round of the Health Survey was carried out smoothly according to the preset time-table. Since it was carried out during the dry season, supervision at all levels was more intensive than in the first round. Most supervisors managed to check the work of more enumerators and corrected a number of errors. A team of three professionals from the head office had also visited some interviewers. The team observed during the first visit interviewers actually interviewing for the Health Survey and during the second trip interviewers collecting data for the nutrition survey. It also examined a number of Health Survey questionnaires completed by these interviewers to see how accurately data were collected and to direct the interviewers' attention to any weak points and strong points. As in the first round the data collection work of the second round was completed within 4 - 6 days.

8 - SURVEY RESULTS

It is nowadays recognized that the status of health of individuals is influenced and in fact determined by the following factors: effects of the environment, behavioral pattern and life style of the individuals, development and provision of health services and genetic and hereditary constitution of the individuals.[3] The 1982/83 Health Survey has enabled collection of data on the health status of the population and on most factors affecting health status (infact only the factor "hereditary and genetic constitution" has been untouched by the Survey). The results of the survey are given below in this section under subsections 8.1 - 8.7.

It will be found that each table on the results of the survey contains the sample size of the relevant part of the population. This has been done to enable readers have a good idea of the precision of results given in each table. In this report table numbers with subscripts (a) and (b) refer to the first round and to the second round of the Health Survey, respectively.

8.1 - Morbidity

Morbidity pertains to a state of having ill health. Illness has been defined as a state of absence of health in one or more parts or organs of the body. Health, in turn, has been defined as a state of physical, mental and social well being.

Collecting data on morbidity was of paramount importance in both rounds of the Health Survey. Therefore results on morbidity should command major curiousity. Morbidity has been given below mostly in terms of period prevalence rate which is a measure of frequency of illness(es) at existence during a defined period of time. It is the proportion of persons having any illness(es) during a defined period of time (the 14 days preceding the day of interview, in the case of this report)

out of the total population at the time of the survey and it is expressed in this report mostly per thousand. Therefore the prevalence rates of having any illness(es) or of any illness(es) given below refer to the prevalence rates during the 14 days reference period in each round. It must be noted that in what follows the words "illness" and "disease" are used interchangably.

Just a word of caution before discussing the results is appropriate. As can be seen from a copy of the final questionnaire (in the appendix) space was given for listing a maximum of only two illnesses for any single member of household and hence not always exhausting all the illnesses that persons might have been suffering from. This may have implication for the values of prevalence rates of specific diseases, such as shown in tables 7 (a) and 7 (b). But the effect of this on the values of such rates is likely to be very small as not many persons are expected to be afflicted with more than two illnesses as the pretest has shown the average number of illnesses per person to be 1.38. Moreover by far most of the results on morbidity have been given in terms of "prevalence rates of having any illness (es)" which should not be affected at all by the number of illnesses persons might have. It will also be noted that the prevalence rates in tables 7 (a), 7 (b), 9 (a), 9 (b), 10 (a) and 10 (b) are higher than those in other relevant tables, such as tables 4 (a) and 4 (b) because the rates in the former pertain to specific illnesses implying the counting of each person with two diseases twice while those in the latter tables represent prevalence of having any illness(es) thus counting each person only once irrespective of the number of diseases he/she might suffer from.

Tables 3 (a) - 10 (a) (at end of script for this subsection) show percentages of persons (out of the population) having only one illness, two illnesses and no illness by broad age groups, prevalence rates of having any illness(es) by age and sex, prevalence rates of having any illness(es) by size of household

and sex, prevalence rates of having any illness(es) by sex and region, prevalence rates of specific illnesses by sex, descending order of the 15 leading causes of morbidity, prevalence rates of disease groups by broad age groups and sex and prevalence rates of disease groups in each of the surveyed regions respectively in the first round while 3 (b) - 10 (b) give the same things respectively for the second round of the Health Survey. And table 8 (c) shows the 15 leading causes of morbidity as compiled from the national health service system for 1981 (1973 Eth. Cal.).

It can be seen from tables 3 (a) and 3 (b) that 25.0% and 23.6% of the population has been reported as suffering from only one disease while 4.7% and 5.4% of the population as having two diseases during the first round and the second round, respectively. Variations by age in the value of the percentage of the population reporting any illness(es) exist and confirm low values at childhood ages (5 -14 years) and high values at infanthood and old ages.

Tables 4 (a) and 4 (b) give prevalence rates of having any disease(s) of 281.2 per thousand for males, 317.1 per thousand for females and 299.0 per thousand for both sexes in the first round and 274.4 per thousand for males, 311.9 per thousand for females and 293.0 per thousand for both sexes in the second round. These results are favourably comparable with results of very few recent similar surveys in other developing countries as can be seen from the following results for a few countries.

Country	Prevalence rates Per Thousand			Length of Reference Period	Date Carried Out
	Male	Female	Both Sexes		
Botswana[4]	210.0	262.1	238.7	14 days	
Colombia[5]	378	443		two weeks	1977 - 80
Indonesia[6]	333	333	333	three months	
Nigeria[7] (rural only)	100	102	101	14 days	1983 - 84
Orissa State[8] (India)	554	574		three months	
Ethiopia (rural only)	281.2	317.1	299.0	14 days	1982 - 83

That prevalence rates should be slightly higher during the first round than during the second round was also expected since according to casual observation illnesses are probably more common around the end of August (when the first round was undertaken) than during January (i.e. time of the second round). This is so because prevalence of some illnesses such as malaria is thought to be higher during the rainy season when ponds, swamps and marshes are convinient hatching places for mosquitoes. It has also been found, in both rounds, that prevalence rates of having any illnesses is higher in females than males. This is generally true in many countries, including developed, and is probably due to the following reasons: (a) better reporting of morbidity among women than men and

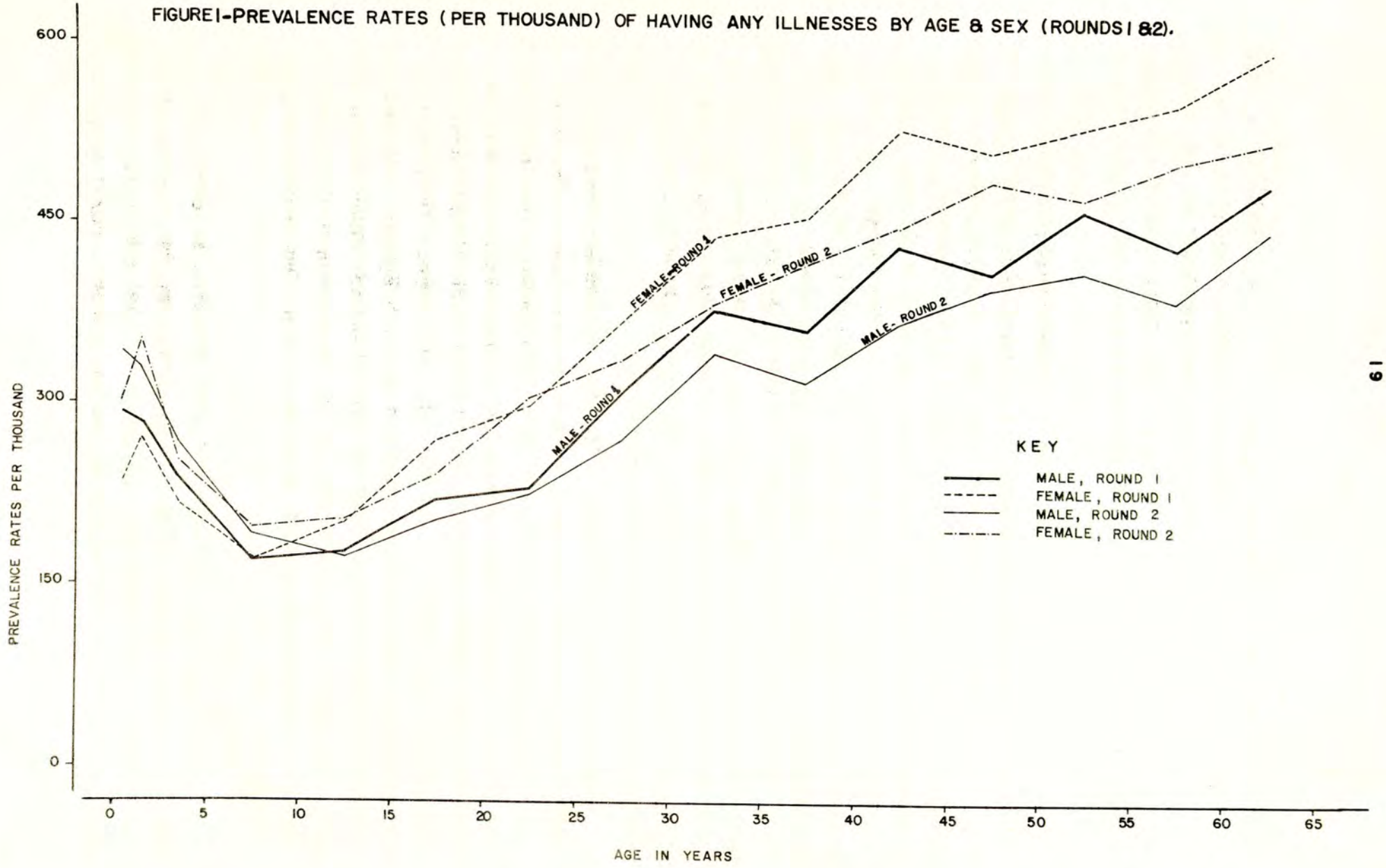
(b) more health complaints (including some minor ones peculiar to women) among women than among men.

The distribution of prevalence rates of having any illness conditions by age and sex also generally meets expectations (refer to Figure 1). It starts with relatively high values at infanthood and early childhood ages and then declines reaching a minimum somewhere in the ages of 5 - 14 years and gradually rises to reach very high values at old ages (60 & above).

Tables 5 (a) and 5 (b) show the prevalence rates of having any illness(es) by sex and size of household in rounds 1 and 2, respectively. Both tables show roughly the same trend for both sexes but more dramatic for females. According to this trend the smaller the size of household the higher the prevalence rate.

As regards prevalence rates of any illness(es) by regions tables 6 (a) and 6 (b) show great variations among the 12 regions in each round, respectively. For instance for both sexes in the first round the prevalence rate for Bale is as low as 175.8 per thousand while for Illubabor it is as high as 451.9 per thousand and in the second round the variation ranges from as low as 190.2 for Hararge to as high as 634.3 per thousand for Gonder. Variations of comparable magnitude exist among the results for each of the sexes. As expected the prevalence rates of having any illness(es) for most regions is smaller in the second round than in the first round. But there are a few exceptions to this. Especially the case of Gonder is unique with the prevalence rate for second round being some 57% above that for the first round which is already one of the highest for the first round. The reason why the residents of Gonder region reported such an extremely high prevalence of being ill during the second round is not very clear. But field supervisors and the regional statistical officer have orally reported that there was drought in four of the seven awrajas and its effects will be felt very acutely after the rainy season has passed

FIGURE I-PREVALENCE RATES (PER THOUSAND) OF HAVING ANY ILLNESSES BY AGE & SEX (ROUNDS I &2).



which is the time of the second round. It is therefore likely that the shortage of food made many people vulnerable to easily falling ill. Moreover it has also been reported by the same regional statistical officer that there was a typhus /relapsing fever epidemic in a fifth awraja at the time of the second round data collection.

Tables 7 (a) and 7 (b) give the prevalence rates of specific illnesses, for which data were collected during both rounds of the survey among the population by sex. A quick glance at these tables reveals that properly unidentified illnesses, that is illness groups such as Other Neck and Head Problems, Other Diarrhoea and Abdominal Conditions, Other Cough , ...etc. have the highest prevalence rates (37.8, 37.9, 28.8, ... per thousand respectively in the case of both sexes in Round 1). This shows that enumerators had little difficulty in identifying the illness groups to which specific illnesses belong. While this may have a depressing effect on the values of the prevalence rates of many of the specific illnesses, however, their rank orders will probably not be affected.

Thus the most prevalent specific illnesses according to the Survey are eye problems, wounds on the skin, malaria, worms in the stool, Diarrhoea, etc. as shown in tables 8 (a) and 8 (b). The 15 most prevalent illnesses are almost the same in both rounds. Table 8 (c) gives the 15 most prevalent illnesses for 1981 (i.e. the Eth. Cal. year 1973) as obtained from the national health service system.[9] As can be seen from this table most of the diseases found to be most prevalent by both rounds of the Survey have also been found to be leading causes of morbidity by the health service system.

However, there is need for some caution in comparing the 15 leading causes of morbidity from the two sources for the following two reasons: (a) tables 8 (a) and 8 (b) represent most prevalent illnesses found in the general rural population

while table 8 (c) represents data obtained only from those who used the health services; (b) table 8 (c) includes much urban data while 8 (a) and 8 (b) represent only rural non - nomadic areas. The ranks in tables 8 (a) and 8 (b) would be absolutely comparable with those in table 8 (c) only if the coverage of the health services were complete and data pertaining to rural sedentary population were compiled. Still, their usefulness as general indicators as compared above cannot be disputed.

Tables 9 (a) and 9 (b) give the prevalence rates of all disease groups by age and sex and tables 10 (a) and 10 (b) give the same rates by region for rounds 1 and 2 respectively. The prevalence rates of most disease groups in the first round and of all illness groups in the second round have lowest values at the age group 5 - 14 years. Except for this age group the prevalence rates of the disease groups All fevers, Venereal Diseases, Conditions on the skin and Other Conditions (i.e. the residual group) generally tend to grow bigger with increasing ages in both rounds. The prevalence rates of All Coughs, All Diarrhoeas and Abdominal Conditions and Conditions on neck and head tend to be high at infanthood, gradually grow smaller until they reach their lowest value somewhere in the age group 5 - 14 years and then get gradually larger and larger with advancing ages in both rounds. The disease group "All Diarrhoea and abdominal conditions" has especially high prevalence rates among infants and at early childhood ages in both rounds. Venereal diseases are practically absent below the age of 15 years and their prevalence rates are very low, especially among women, even above the age of 14 years. It is possible that they have been under reported. The rates for venereal diseases are much lower among women than among men and the two probable reasons for this are: (a) some of these diseases are not easily recognizable among women and (b) possibly failure of reporting these diseases was higher among women than among men because women might be less extrovert than men in these matters. Why venereal diseases should be found among babies and infants aged under one year even on as

small scale as in tables 9 (a) and 9 (b) might not be evident at first sight. But the most probable explanation for their presence among infants is to assume that they are of congenital origin. They have been reported to exist among only male infants in only Wellega region in both rounds with high prevalence rates (7.0 and 6.7 per thousand).

The distributions of each disease group by region are shown in tables 10 (a) and 10 (b) for the first and the second rounds, respectively. Diarrhoea and Abdominal Conditions and problems on Neck and Head are the commonest of all disease groups in five regions and four regions, respectively in the first round while problems on Neck and Head has been reported to be the commonest illness group in nine regions in the second round. The residual group, other conditions, (i.e. diseases not belonging to any of the seven identified illness groups) also ranks high among the health problems of most regions in each of the rounds. This is so because (a) there are so many health problems that cannot be included in any of the seven identified disease groups and therefore will be thrown into the residual group; and (b) it is also likely that the lay interviewers have wrongly included a few of the health complaints into the residual group thus inflating it a little further.

As mentioned earlier no data on marital status, religion, ethnic group and education were collected during the first round Health Survey. It was also impossible to relate variations in prevalence rates of any disease(s) to these characteristics by linking the results of the first round Health Survey with that of the first round Nutrition Survey, which included data on these variables and which was carried out only about a week later, because there were too many unmatchable records.

However, as data on all the above mentioned variables were collected in the second round of the Health Survey interrelations of the prevalence rates of having any illness(es) with each of these variables have been made and are given in tables 11, 12, 13, 14 and 15, at the end of this subsection.

According to table 11 prevalence rates of having any disease(s) for both sexes, are generally highest among the widowed followed by among the married and the divorced and they are the lowest among the singles. But this fact has to be considered with caution as the numbers of widowed and divorced persons in the sample are generally small their numbers being significant only at advanced ages. Also the number of single persons in the sample in ages 30 years and above, and the number of married persons in the sample below the age of 25 years are small. The fact that those reported as single are relatively predominantly young explains why prevalence of diseases among them is the lowest.

Table 12 shows that, except for the age under 1 year, prevalence rate of having any disease(s) is highest, by a considerable margin, among the orthodox christians than among other religious groups in all age groups. This is generally true for each of the sexes except in the age groups under 1 year and 65 and above years where prevalence rates for the females belonging to other religions are slightly higher than for female orthodox christians. Generally the prevalence rates of having any disease(s), in almost all given age groups, among other christians, moslems and persons belonging to other religions (including atheists) are close to each other.

Tables 13 and 14 show interrelations between prevalence rates of having any disease(s) and educational attainment for the population aged 10 years and above. In examining these tables one has to bear in mind that in the rural areas the number of educated people in the age groups at both extreme ends is quite small (in fact no persons aged 10 - 14 years completing grades 9 and above and aged 65 years and above completing grades 4 - 6 or 7 - 8 were reported). Hence it will be observed that there will be no particular trend by educational attainment in the prevalence rates of having any illness(es) among the population in all age groups.

Consequently the values of some prevalence rates (especially in the age group 65 years and above) tend to be irregularly distributed and in such cases extremely low values and extremely high values will only indicate the smallness of the number of persons with some education in the sample in those particular cells and that either almost all of them have been reported ill or almost nobody has been reported ill.

However, table 13 shows that prevalence rates of having any illness(es) are considerably higher among the illiterates than among literates in the age groups 15 - 44 and 45 - 64 years. Only in the age group 10 - 14 years are prevalence rates of being ill higher among literates than among illiterates. In general this fits well within expectations as literates are likely to be better exposed to elementary concepts and practices of modern hygiene and health than illiterates.

According to table 14 only in the age group 15 - 44 years is there a clear trend of lower prevalence rates of having any illness(es) with higher educational attainment (i.e. highest grade completed). The number of persons with some education is so small in most cells in the other three age groups that there is no clear trend in the values of the prevalence rates of having any disease(s).

Considering behaviour of prevalence rates of having any disease(s) by ethnic groups table 15 shows prevalence rates among 13 ethnic groups by age and sex. Despite the fact that there are more than 90 known ethnic groups in the country it was necessary to limit the compilation of data to 13 ethnic groups because each of the remaining "covered ethnic groups" has, according to the preliminary results of the first National Population and Housing Census of May 1984, small populations (substantially below 100,000) and hence too small for getting estimates through a sample survey of the size of the Health Survey. It is said "covered ethnic groups" in the last sentence above because three major ethnic groups (Tigraway, Tigre and

Affar) have not been covered by the Health Survey because two of them are found in the two most northern regions and the third one is predominantly nomadic and hence not covered. It could also be seen from table 15 that only too few persons belonging to the ethnic group "Somale" have been covered that for all practical purposes it could be said "Somales" have not been covered by the Health Survey. It should be born in mind that most "Somales" living in the rural areas of Ethiopia are also nomadic.

According to table 15 prevalence rate of having any illness(es) for each of these major ethnic groups varies with age almost the same way it varies for the total . That is, prevalence rate of having any disease(s) for each ethnic group starts with relatively high values at infanthood and early childhood, decreases until it reaches its lowest value somewhere in the age group 5 - 14 years and then gradually increases to reach very high values at advanced ages. Also like for the 12 regions except for one ethnic group (Dometae) prevalence rates of having any disease(s) in total, have higher values for females than for males for each of the remaining 11 ethnic groups. Another point that can be easily seen in table 15 is that the prevalence rates of having any disease(s) for some of the ethnic groups (like for dometae or Kullo, Sidama and Gamo) are relatively very small.

Table 3 (a) - Percentage of persons who reported having only one Illness, two Illnesses and no Illness, during the 14 days reference period, by age and sex
(Round 1)

Health Condition	Ages in Years							
	Under 1	1	2-4	5-14	15-44	45-64	65+	Total
Having no Diseases								
Male	35.3	35.9	38.6	42.7	33.2	29.2	28.4	36.2
Female	38.2	36.4	38.5	39.4	32.2	21.8	20.4	33.9
Both Sexes	73.5	72.3	77.1	82.1	65.4	51.0	49.9	70.1
Having only one Disease								
Male	13.4	12.3	11.3	8.2	12.3	18.0	21.5	12.0
Female	10.7	12.3	9.6	8.1	16.1	19.3	17.8	13.0
Both Sexes	24.0	24.6	20.9	16.2	28.5	37.3	39.2	25.0
Having two Diseases								
Male	1.0	1.8	.8	.8	2.4	5.1	6.6	2.1
Female	1.2	1.2	1.0	.8	3.5	6.4	5.1	2.6
Both Sexes	2.2	3.0	1.8	1.6	5.9	11.5	11.7	4.7

Table 3 (a) (Contd.)

Health Condition	Ages in Years							
	Under 1	1	2-4	5-14	15-44	45-64	65+	Total
Total reported ill								
Male	14.5	14.2	12.1	9.0	14.8	23.2	28.2	14.2
Female	11.9	13.5	10.8	8.9	19.7	25.8	23.0	15.7
Both Sexes	26.5	27.7	22.9	17.9	34.6	49.0	51.2	29.9
Total								
Male	49.8	50.1	50.7	51.7	48.0	52.4	56.6	50.4
Female	50.2	49.9	49.3	48.3	52.0	47.6	43.4	49.6
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of persons in the sample								
Male	1,125	1,125	3,406	9,162	10,288	3,253	1,410	29,769
Female	1,082	1,167	3,306	8,633	11,350	3,222	1,190	29,950
Total	2,207	2,292	6,712	17,795	21,638	6,475	2,600	59,719

Table 3 (b) - Percentage of persons who reported having only one Illness, two Illnesses and no Illness, during the 14 days reference period, by age and sex - (Round 2)

Health Condition	Ages in Years							
	Under 1	1	2-4	5-14	15-44	45-64	65+	Total
Having no Diseases								
Male	32.9	32.7	37.0	42.0	34.6	31.3	30.7	36.5
Female	34.9	33.1	36.9	38.7	34.0	23.9	22.4	34.2
Both Sexes	67.8	65.8	73.9	80.7	68.6	55.2	53.1	70.7
Having only one Disease								
Male	14.8	13.3	11.9	8.0	10.8	16.0	18.2	11.2
Female	12.8	15.1	11.0	8.4	14.1	17.6	16.0	12.5
Both Sexes	27.5	28.4	23.0	16.5	24.9	33.6	34.3	23.6
Having two diseases								
Male	2.3	2.8	1.6	1.4	2.4	5.3	7.1	2.5
Female	2.3	2.9	1.4	1.2	3.8	5.5	5.3	2.9
Both Sexes	4.6	5.7	3.0	2.6	6.2	10.8	12.4	5.4

Table 3 (b) (Contd.)

Health Condition	Ages in Years							
	Under 1	1	2-4	5-14	15-44	45-64	65+	Total
Total reported ill								
Male	17.1	16.1	13.6	9.5	13.3	21.5	25.5	13.8
Female	15.1	18.1	12.5	9.8	18.1	23.2	21.4	15.5
Both Sexes	32.2	34.2	26.1	19.3	31.4	44.8	46.9	29.3
Total								
Male	50.0	48.8	50.5	51.5	47.9	52.8	56.2	50.3
Female	50.0	51.2	49.5	48.5	52.1	47.2	43.8	49.7
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of persons in the sample								
Male	1,151	1,017	3,255	9,065	10,080	3,236	1,380	29,184
Female	1,124	1,074	3,173	8,610	11,125	3,153	1,172	29,431
Total	2,275	2,091	6,428	17,675	21,205	6,389	2,552	58,615

Table 4 (a) - Prevalence Rates (per thousand) of having any Illness(es) during the 14 days reference period among different age-sex groups of the population - (Round 1)

Age Groups	Male	Female	Total	Number of persons in the sample		
				Male	Female	Both sexes
Under 1	291.9	237.9	264.8	1,125	1,082	2,207
1	283.9	270.7	277.3	1,125	1,167	2,292
2 - 4	238.3	218.5	228.6	3,406	3,306	6,712
5 - 9	171.2	172.5	171.9	5,457	5,334	10,791
10 - 14	178.7	202.9	190.0	3,705	3,299	7,004
15 - 19	221.1	271.3	244.0	2,516	2,150	4,666
20 - 24	231.0	299.5	269.1	1,721	2,096	3,817
25 - 29	311.0	367.9	342.9	1,720	2,209	3,929
30 - 34	378.4	440.5	413.0	1,540	1,937	3,477
35 - 39	361.9	456.3	409.7	1,557	1,691	3,248
40 - 44	432.8	530.6	480.5	1,234	1,267	2,501
45 - 49	410.0	511.1	457.3	1,082	1,012	2,094
50 - 54	462.3	532.2	498.1	820	921	1,741
55 - 59	431.8	551.9	484.8	689	609	1,298
60 - 64	484.1	595.8	537.5	662	680	1,342
65 +	497.6	530.2	511.7	1,410	1,190	2,600
Total	281.2	317.1	299.0	29,769	29,950	59,719

Table 4 (b) - Prevalence Rates (per thousand) of having any Illness(es) during the 14 days reference period among different age-sex groups of the population - (Round 2)

Age Groups	Male	Female	Total	Number of persons in the sample		
				Male	Female	Both sexes
Under 1	342.8	301.5	322.2	1,151	1,124	2,275
1	330.1	353.0	341.8	1,017	1,074	2,091
2 - 4	268.8	253.2	261.1	3,255	3,173	6,428
5 - 9	192.3	198.7	195.5	5,277	5,219	10,496
10 - 14	174.6	205.9	189.3	3,788	3,391	7,179
15 - 19	204.8	243.1	222.0	2,566	2,110	4,676
20 - 24	226.7	306.3	270.6	1,605	1,948	3,553
25 - 29	271.5	338.3	309.3	1,667	2,197	3,864
30 - 34	343.5	384.2	366.1	1,464	1,821	3,285
35 - 39	320.2	417.9	371.8	1,548	1,791	3,339
40 - 44	367.7	448.6	407.2	1,230	1,258	2,488
45 - 49	396.8	487.2	439.7	1,085	1,014	2,099
50 - 54	411.3	472.6	442.0	803	865	1,668
55 - 59	387.0	503.6	438.9	689	642	1,331
60 - 64	445.5	521.6	480.1	659	632	1,291
65 +	453.7	487.9	468.7	1,380	1,172	2,552
Total	274.4	311.9	293.0	29,184	29,431	58,615

Table 5 (a) - Prevalnce Rates (per thousand) of having any Illness(es) during the reference period, by size of household and sex - (Round 1)

Number of persons in the household	Male	Female	Both sexes	Number of households in the sample	Number of persons in the sample
1	398.1	727.4	576.2	751	751
2	352.5	455.3	410.9	1,741	3,482
3	308.8	365.2	337.9	2,328	6,984
4	295.6	316.6	305.9	2,367	9,468
5	282.0	322.2	301.8	2,130	10,650
6	268.1	269.8	268.9	1,567	9,402
7	266.2	289.0	277.3	1,089	7,623
8	255.6	269.7	262.3	659	5,272
9	241.9	277.4	258.8	346	3,114
10 and Above	253.7	274.3	263.9	278	2,973
Total	281.2	317.1	299.0	13,256	59,719

Table 5 (b) - Prevalnce Rates (per thousand) of having any Illness(es) during the reference period, by size of household and sex - (Round 2)

Number of persons in the household	Male	Female	Both sexes	Number of households in the sample	Number of persons in the sample
1	343.4	645.5	501.8	777	777
2	369.3	440.0	408.9	1,614	3,228
3	307.6	347.5	328.3	2,301	6,903
4	277.9	316.7	297.1	2,322	9,288
5	283.9	308.1	295.8	2,072	10,360
6	259.5	290.6	274.8	1,545	9,270
7	265.8	277.3	271.5	1,091	7,637
8	243.0	283.6	262.3	649	5,192
9	220.5	258.2	238.6	332	2,988
10 and Above	245.2	262.5	253.7	279	2,972
Total	274.4	311.9	293.0	12,982	58,615

Table 6 (a) - Prevalence Rates (per thousand) of having any Illness(es) by sex and Region - (Round 1)

Region	Male	Female	Both sexes	Rank
Arssi	311.2	348.8	329.4	4
Bale	146.2	204.3	175.8	12
Gamo Gofa	263.5	276.9	270.3	8
Gojjam	250.5	305.8	279.0	7
Gonder	388.8	421.5	404.3	3
Hararge	228.6	232.2	230.3	11
Illubabor	435.4	468.0	451.9	1
Kefa	287.1	322.7	304.5	5
Shoa	238.5	272.9	255.6	10
Sidamo	251.3	274.6	262.8	9
Wellega	401.7	492.0	447.1	2
Wollo	274.5	302.7	288.4	6
Country	281.2	317.1	299.0	

Table 6 (b) - Prevalence Rates (per thousand) of having any Illness(es) by sex and Region - (Round 2)

Region	Male	Female	Both sexes	Rank
Arssi	266.4	324.9	294.9	5
Bale	170.1	215.8	193.4	11
Gamo Gofa	193.7	237.3	216.2	10
Gojjam	218.6	265.7	242.6	6
Gonder	601.3	670.6	634.3	1
Hararge	175.4	205.3	190.2	12
Illubabor	432.3	484.3	458.7	2
Kefa	302.7	307.8	305.2	4
Shoa	210.6	253.2	231.7	8
Sidamo	207.0	230.7	218.7	9
Wellega	423.3	491.5	457.7	3
Wollo	234.5	248.7	241.6	7
Country	274.4	311.9	293.0	

Table 7 (a) - Prevalence Rates (per thousand) of each reported Illness among the two sexes of the population in the rural areas of the twelve regions - (Round 1)

Illnesses and Illness Groups	Male	Female	Both sexes
Malaria	17.4	13.4	15.4
Measles	1.5	2.0	1.8
Infectious jaundice	3.5	4.5	4.0
Meningits	.6	.3	.5
Typhus/relapsing fever	3.9	4.9	4.4
Other fever	9.3	9.5	9.4
All fevers	36.2	34.7	35.4
Tuberculosis	6.9	8.4	7.7
Pnemonia	6.2	6.3	6.3
Whooping cough	3.8	3.9	3.8
Other cough	28.0	29.7	28.8
All coughs	44.8	48.4	46.6
Diarrhoea	15.5	13.2	14.4
Gastro enteristis	5.1	4.7	4.9
Worms in the stool	16.0	14.3	15.2
Other diarrhoea and abdominal conditions	38.4	37.4	37.9
All diarrhoea & abdominal conditions	75.0	69.5	72.3
Goitre	1.3	4.6	3.0
Ear problem	5.5	6.0	5.8
Eye problem	19.1	27.0	23.0
Throat problem	1.5	1.6	1.5
Teeth & gum problem	5.2	8.0	6.6
Other neck & head problems	34.0	41.5	37.8
All conditions on neck & head	66.7	88.7	77.6
Venereal Diseases	7.9	4.0	6.0
Wound on skin	19.1	16.2	17.7
Leprosy	2.0	2.3	2.1
Elephantiasis	6.7	6.9	6.8
Other skin problems	8.0	7.4	7.7
All conditions on the skin	35.8	32.8	34.3
Complicated pregnancy	.0	5.7	2.8
Abortion	.0	.9	.4
Complicated child birth	.0	.8	.4
Complicated puerperium	.0	1.8	.9
Menstruation & other maternal problems	.0	4.7	2.3
All maternal health problems	.0	13.9	6.9

Table 7 (a) (Contd.)

Illnesses and Illness Groups	Male	Female	Both sexes
Malnutrition	3.8	4.0	3.9
Tetanus	.1	.1	.1
Mental disturbance	2.0	1.5	1.8
Other conditions not mentioned above	49.3	70.6	59.8
Not stated	1.7	1.8	1.8
All reported cases	323.5	369.9	346.5
Total	1,000.0	1,000.0	1,000.0
Number of persons in the sample	29,769	29,950	59,719

Table 7 (b) - Prevalence Rates (per thousand) of each reported Illness among the two sexes of the population in the rural areas of the twelve regions - (Round 2)

Illnesses and Illness Groups	Male	Female	Both sexes
Malaria	14.1	8.0	11.1
Measles	2.3	2.1	2.2
Infectious jaundice	1.8	2.2	2.0
Meningits	.5	.5	.5
Typhus/relapsing fever	3.1	4.6	3.8
Other fever	7.9	7.2	7.6
All fevers	29.7	24.6	27.1
Tuberculosis	5.7	6.0	5.9
Pnemonia	5.8	6.3	6.0
Whooping cough	4.0	3.5	3.8
Other cough	45.8	51.9	48.8
All coughs	61.3	67.6	64.5
Diarrhoea	11.8	10.9	11.3
Gastro enteritis	5.4	6.1	5.8
Worms in the stool	14.6	12.4	13.5
Other diarrhoea and abdominal conditions	28.8	33.7	31.2
All diarrhoea & abdominal conditions	60.5	63.1	61.8
Goitre	1.7	4.6	3.1
Ear problem	5.9	5.8	5.8
Eye problem	24.4	30.8	27.6
Throat problem	2.0	1.6	1.8
Teeth & Gum problem	4.1	7.3	5.7
Other neck & head problems	34.8	47.9	41.3
Conditions on neck & head	72.8	97.9	85.3
Venereal Diseases	6.6	4.2	5.5
Wound on skin	23.4	21.2	22.3
Leprosy	2.4	2.1	2.2
Elephantiasis	6.9	6.8	6.8
Other skin problems	5.7	4.1	4.9
All conditions on the skin	38.3	34.1	36.2

Table 7 (b) (Contd.)

Illnesses and Illness Groups	Male	Female	Both Sexes
Complicated pregnancy	.0	5.9	2.9
Abortion	.0	.7	.3
Complicated child birth	.0	.8	.4
Complicated puerperium	.0	1.4	.7
Menstruation & other maternal problems	.0	3.4	1.7
All maternal health problems	.0	12.1	6.0
Malnutrition	4.0	2.9	3.5
Tetanus	.2	.0	.1
Mental disturbance	2.0	1.1	1.6
Other conditions not mentioned above	46.4	60.5	53.4
Not Stated	.2	.1	.2
All reported cases	322.1	368.3	345.1
Total	1,000.0	1,000.0	1,000.0
Number of persons in the sample	29,184	29,431	58,615

Table 8 (a) - The 15 Leading Causes of Morbidity for each sex by descending order of prevalence (Health Survey-Round 1)

Rank Order	Male		Female		Both Sexes	
	Illnesses	Prevalence Rate	Diseases	Prevalence Rate	Diseases	Prevalence Rate
1	Eye Problem	19.1	Eye Problem	27.0	Eye Problem	23.0
2	Wound on skin	19.1	Wound on skin	16.2	Wound on skin	17.7
3	Malaria	17.4	Worms in the stool	14.3	Malaria	15.4
4	Worms in the stool	16.0	Malaria	13.4	Worms in the stool	15.2
5	Diarrhoea	15.5	Diarrhoea	13.2	Diarrhoea	14.4
6	Venereal Diseases	7.9	Tuberculosis	8.4	Tuberculosis	7.7
7	Tuberculosis	6.9	Teeth & Gum Prob.	8.0	Elephantiasis	6.8
8	Elephantiasis	6.7	Elephantiasis	6.9	Teeth & Gum Prob.	6.6
9	Pnemonia	6.2	Pnemonia	6.3	Pnemonia	6.3
10	Ear Problem	5.5	Ear Problem	6.0	Ear Problem	5.8
11	Teeth & Gum Prob.	5.2	Complicated Pregnancy	5.7	Gastro-Enteritis	4.9
12	Gastro Enteritis	5.1	Typhus/Relapsing Fever	4.9	Typhus/relapsing Fever	4.4
13	Typhus/Relapsing Fever	3.9	Gastro Enteritis	4.7	Infectious Jaundice	4.0
14	Whooping Cough	3.8	Goitre	4.6	Malnutrition	3.9
15	Malnutrition	3.8	Infectious Jaundice	4.5	Whooping Cough	3.8

Table 8 (b) - The 15 Leading Causes of Morbidity for each sex by descending order of prevalence (Health Survey-Round 2)

Rank Order	Male		Female		Both Sexes	
	Illnesses	Prevalence Rate	Diseases	Prevalence Rate	Diseases	Prevalence Rate
1	Eye problem	24.4	Eye problem	30.8	Eye problem	27.6
2	Wound on skin	23.4	Wound on skin	21.2	Wound on skin	22.3
3	Worm in the stool	14.6	Worm in the stool	12.4	Worms in the stool	13.5
4	Malaria	14.1	Diarrhoea	10.9	Diarrhoea	11.3
5	Diarrhoea	11.8	Malaria	8.0	Malaria	11.1
6	Elephantiasis	6.9	Teeth & Gum Prob.	7.3	Elephantiasis	6.8
7	Venereal Diseases	6.6	Elaphantiasis	6.8	Pnemonia	6.0
8	Ear problem	5.9	Pnemonia	6.3	Tuberculosis	5.9
9	Pnemonia	5.8	Gastro Enteritis	6.1	Ear problem	5.8
10	Tuberculosis	5.7	Tuberculosis	6.0	Gastro Enteritis	5.8
11	Gastro Enteritis	5.4	Complicated Pregnancy	5.9	Teath and Gum Prob.	5.7
12	Teeth and Gum Prob.	4.1	Ear Problem	5.8	Venereal Diseases	5.5
13	Whooping Cough	4.0	Typhus/Relapsing Fever	4.6	Whooping Caugh	3.8
14	Malnutrition	4.0	Goitre	4.6	Typhus/Relapsing Fever	3.8
15	Typhus/Relapsing Fever	3.1	Venereal Diseases	4.2	Malnutrition	3.5

Table 8 (c) - The 15 Leading Causes of Morbidity as compiled from the Health Service System for Eth. Cal. 1973 in descending order and their ranks in each round of the Health Survey (Both Sexes)

Rank Order	Names of Illnesses	Number of observed Cases	Rank order in the Health Survey	
			Round 1	Round 2
1	Helmithiasis	224,483	4	3
2	Dysentry (including Gastro Enteritis)	197,960		
3	Eye Diseases	136,907	1	1
4	Skin Infections	105,483	2	2
5	Acute Upper Respiratory Infection	103,133		
6	Malaria	86,430	3	5
7	Venereal Diseases	81,625		12
8	Rheumatic Pain	77,860		
9	Pneumonia	77,398	9	7
10	Gastritis	75,765		
11	Bronchitis	68,518		
12	Malnutrition	53,448	14	15
13	Ottitis Media and Mastoiditis	48,256	10	9
14	Tuberculosis	43,581	6	8
15	Dental Cases and all Other Diseases of tooth and Gum.	38,646	8	11

Source:- Ministry of Health, Statistics Division.

Table 9 (a) - Prevalence Rates (per thousand) of eight Illness groups among different Sex-Age groups of the population of rural areas -(Round 1)

Illness Groups and Sex	Entries in each of the following age groups						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
All Fevers							
Male	26.8	30.4	25.8	43.5	47.2	51.0	36.2
Female	21.4	25.5	27.8	41.9	49.7	21.8	34.7
Both Sexes	24.1	28.0	26.7	42.7	48.4	38.3	35.4
All Coughs							
Male	79.0	45.5	26.3	45.1	64.0	92.8	44.8
Female	51.6	50.2	33.4	46.4	77.0	100.0	48.4
Both Sexes	65.3	47.8	29.7	45.8	70.2	95.9	46.6
All Diarrhoea and Abdominal conditions							
Male	112.8	100.0	54.0	70.6	94.0	92.3	75.0
Female	103.3	85.0	58.7	64.7	83.9	68.3	69.5
Both Sexes	108.0	92.6	56.3	67.5	89.2	81.9	72.3
All Conditions on Neck and Head							
Male	42.6	34.6	35.5	80.2	128.9	148.6	66.7
Female	40.2	29.4	33.9	120.7	193.3	196.8	88.7
Both Sexes	41.4	32.0	34.7	101.3	159.6	169.5	77.6
Venereal Diseases							
Male	.6	.0	.2	11.2	24.1	27.6	7.9
Female	.0	.0	.4	6.1	8.7	17.7	4.0
Both Sexes	.3	.0	.3	8.6	16.8	23.3	6.0
All Conditions on the Skin							
Male	23.5	34.7	23.3	38.4	57.8	61.3	35.8
Female	31.3	33.5	21.4	34.1	54.3	48.4	32.8
Both Sexes	27.4	34.1	22.4	36.2	56.2	55.7	34.3

Table 9 (a) (Contd.)

Illness Groups and Sex	Entries in each of the following age groups						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
All Maternal Health problems							
Male	.0	.0	.0	.0	.0	.0	.0
Female	.0	.0	.2	33.1	9.8	4.6	13.9
Both Sexes	.0	.0	.1	17.2	4.7	2.0	6.9
All other conditions including not stated							
Male	25.6	25.4	24.7	69.8	125.3	140.9	56.9
Female	14.9	30.3	25.2	100.2	198.6	191.1	77.9
Both Sexes	20.2	27.9	24.9	85.6	160.2	162.7	67.3
Number of persons in the sample							
Male	1,125	4,531	9,162	10,288	3,253	1,410	29,769
Female	1,082	4,473	8,633	11,350	3,222	1,190	29,950
Both Sexes	2,207	9,004	17,795	21,638	6,475	2,600	59,719

Table 9 (b) - Prevalence Rates (per thousand) of eight Illness Groups among different Sex-Age groups of the population of rural areas - (Round 2)

Illness Groups and Sex	Entries in each of the following age groups						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
All Fevers							
Male	30.3	30.5	22.1	33.5	38.1	27.6	29.7
Female	15.5	28.3	19.1	27.0	27.1	31.7	24.6
Both Sexes	22.9	29.4	20.7	30.1	32.9	29.4	27.1
All Coughs							
Male	104.3	71.7	43.8	60.5	74.6	86.8	61.3
Female	80.9	77.9	56.4	61.0	88.1	118.8	67.6
Both Sexes	92.6	74.8	49.9	60.8	81.0	100.8	64.5
All Diarrhoea and Abdominal conditions							
Male	113.1	99.5	52.6	45.1	61.6	61.8	60.3
Female	123.7	101.2	54.4	51.9	55.0	54.9	63.1
Both Sexes	118.4	100.4	53.5	48.7	58.5	58.8	61.8
All Conditions on Neck and Head							
Male	85.1	48.0	42.4	79.4	131.5	155.0	72.8
Female	84.1	44.4	44.5	127.5	196.3	178.8	97.9
Both Sexes	84.6	46.2	43.4	104.4	162.1	165.4	85.3
Venereal Diseases							
Male	.5	.2	.2	10.1	16.7	25.9	6.6
Female	.0	.0	.2	6.7	11.5	12.6	4.2
Both Sexes	.3	.1	.2	8.4	14.3	20.1	5.5
All Conditions on the Skin							
Male	35.7	40.3	30.5	34.0	61.0	65.8	38.3
Female	30.5	38.2	27.6	30.5	54.9	55.6	34.1
Both Sexes	33.1	39.2	29.1	32.2	58.1	61.3	36.2

Table 9 (b) (Contd.)

Illness Groups and Sex	Entries in each of the following age groups						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
All Maternal Health problems							
Male	.0	.0	.0	.0	.0	.0	.0
Female	.0	.3	.1	27.9	13.5	.5	12.1
Both Sexes	.0	.2	.0	14.5	6.4	.2	6.0
All other conditions including not stated							
Male	20.8	29.2	17.3	62.9	121.9	153.9	52.8
Female	11.7	22.3	23.2	84.7	160.0	154.6	64.6
Both Sexes	16.3	25.8	20.1	74.3	139.9	154.2	58.7
Number of persons in the sample							
Male	1,151	4,272	9,065	10,080	3,236	1,380	29,184
Female	1,124	4,247	8,610	11,125	3,153	1,172	29,431
Both Sexes	2,275	8,519	17,675	21,205	6,389	2,552	58,615

Table 10 (a) - Pervalence Rates (per thousand) of eight Illness Groups by Region - (Round 1)

Regions	All fevers	All coughs	Diarrhoea & abdominal	Neck and Head	Venereal Diseases	Cond. on the skin	Maternal problems	Other (including not stated)	All cond. (including not stated)	Persons in the sample
Arssi	28.7	61.0	105.5	104.1	7.0	20.3	7.6	73.6	407.8	4,545
Bale	13.0	23.4	44.7	64.6	2.8	13.2	6.2	29.4	197.4	4,303
Gamo Gofa	85.6	35.3	44.4	35.3	.3	34.8	3.4	55.8	294.9	3,894
Gojjam	15.9	34.2	44.9	74.2	2.7	48.2	7.3	90.7	318.1	4,123
Gonder	60.8	52.7	116.1	111.5	1.6	53.9	12.6	78.6	487.8	5,063
Hararge	23.0	33.3	76.0	55.7	2.3	13.4	4.6	41.2	249.6	4,218
Illubabor	40.5	69.5	115.1	116.4	7.5	77.7	3.8	115.7	546.1	3,884
Kefa	53.3	51.1	81.8	60.7	.9	25.7	6.1	56.2	335.8	4,104
Shoa	29.1	45.0	54.9	70.8	9.9	26.6	4.7	58.5	299.5	11,106
Sidamo	45.1	56.7	42.6	42.8	11.3	28.7	3.9	56.2	287.3	3,964
Wellega	36.7	69.6	131.6	127.4	7.5	57.3	12.1	101.L	543.3	6,439
Wollo	24.1	32.9	68.7	89.9	4.7	32.8	10.6	65.1	328.9	4,076
Total	35.4	46.6	72.3	77.6	6.0	34.3	7.0	67.3	346.5	59,719

Table 10 (b) - Pervalence Rates (per thousand) of eight Illness Groups by Region - (Round 2)

Regions	All fevers	All coughs	Diarrhoea & abdominal	Neck and Head	Venereal Diseases	Cond. on the skin	Maternal problems	Other (including not stated)	All cond. (including not stated)	Persons in the sample
Arssi	19.6	59.3	88.3	96.7	7.1	29.2	11.1	46.3	357.6	4,553
Bale	12.6	52.9	39.1	62.8	3.4	20.5	5.2	18.1	214.6	4,149
Gamo Gofa	48.6	36.0	34.0	48.6	.6	22.9	2.2	45.2	238.1	3,638
Gojjam	12.6	47.6	35.9	65.4	2.6	42.8	4.5	56.8	268.1	4,256
Gonder	63.9	110.3	158.4	225.9	2.2	97.4	14.8	160.2	833.0	4,713
Hararge	15.8	42.8	57.7	49.3	.7	9.7	5.3	35.4	216.6	4,158
Illubabor	29.5	103.4	116.6	134.5	4.1	60.4	6.8	112.1	567.4	3,727
Kefa	38.9	89.3	64.7	69.7	.9	28.4	5.2	44.9	342.0	4,086
Shoa	18.6	54.8	38.7	72.8	9.0	25.1	3.4	43.1	265.5	11,047
Sidamo	29.8	73.4	30.2	38.0	9.6	22.8	4.1	27.0	234.8	3,889
Wellega	38.8	101.3	117.1	143.2	8.8	58.7	10.1	85.6	563.6	6,411
Wollo	18.8	34.9	45.0	65.5	3.8	35.1	6.0	61.1	270.0	3,988
Total	27.1	64.5	61.8	85.3	5.5	36.2	6.1	58.7	345.1	58,615

Table 11 - Prevalence Rates (per thousend) of any reported Illness(es) among different marital, sex and age groups of the population aged 10 years and above - (Round 2)

Marital Status and sex	Age in Years				
	10-14	15-44	45-64	65+	Total
Total					
Male	174.6	277.5	407.8	453.7	291.2
Female	205.9	346.9	492.7	487.9	351.6
Both Sexes	189.3	313.6	447.9	468.7	321.2
Single					
Male	174.9	209.6	509.1	148.1	192.0
Female	201.1	246.8	314.0	305.6	214.2
Both Sexes	186.7	219.1	413.5	208.4	200.3
Married					
Male	162.1	315.8	407.0	458.2	356.4
Female	248.2	357.6	476.4	512.4	379.0
Both Sexes	221.8	340.5	433.5	468.2	368.1
Widowed					
Male	.0	410.4	372.3	479.0	424.5
Female	264.6	453.8	512.7	492.7	493.3
Both Sexes	247.0	446.3	501.4	491.0	485.5
Divorced					
Male	371.7	246.1	444.9	398.1	295.2
Female	278.0	334.5	562.9	465.8	404.1
Both Sexes	282.4	297.1	533.4	444.5	366.2
Not Stated					
Male	154.5	242.3	.0	185.9	205.4
Female	26.5	206.8	529.5	143.3	170.1
Both Sexes	107.8	234.6	529.5	154.9	191.1
Number of persons in the sample					
Male	3,788	10,080	3,236	1,380	18,484
Female	3,391	11,125	3,153	1,172	18,841
Both Sexes	7,179	21,205	6,389	2,552	37,325

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Table 12 - Prevalence Rates (per thousand) of any reported illness(es) among different religions, sex and age groups of the population-(Round 2)

Religion and Sex	Age in Years							
	Under 1	1	2-4	5-14	15-44	45-64	65+	Total
Total								
Male	342.8	330.1	268.8	184.8	277.5	407.8	453.7	274.4
Female	301.5	353.0	253.2	201.6	346.9	492.7	487.9	311.9
Both Sexes	322.2	341.8	261.1	192.9	313.6	447.9	468.7	293.0
Orthodox								
Male	328.6	399.6	285.5	205.3	306.9	446.6	504.7	302.1
Female	315.2	398.9	266.2	236.6	386.6	536.0	525.7	348.4
Both Sexes	321.8	399.3	276.0	220.2	348.0	488.9	513.8	324.9
Other Christian								
Male	356.6	257.2	251.7	133.3	240.6	336.1	433.7	225.3
Female	274.5	335.3	217.8	156.1	312.9	428.6	396.0	260.1
Both Sexes	321.3	301.4	233.5	144.8	278.2	378.2	417.9	243.0

Table 12 (Contd.)

Religion and Sex	Age in Years							
	Under 1	1	2-4	5-14	15-44	45-64	65+	Total
Moslem								
Male	361.9	255.2	243.3	172.9	248.8	366.9	380.4	250.o
Female	273.0	289.5	254.4	167.9	308.6	447.9	439.9	279.3
Both Sexes	317.9	272.6	248.7	170.4	280.5	404.5	406.5	264.7
Other								
Male	377.6	230.7	287.3	150.4	222.0	315.5	386.7	227.7
Female	317.8	277.6	219.1	154.1	264.6	405.9	546.7	249.3
Both Sexes	346.5	251.6	254.7	152.3	244.2	363.0	461.8	238.7
Not Stated								
Male	167.7	122.0	82.4	51.5	235.0	428.2	75.3	166.8
Female	390.2	426.5	85.9	50.2	255.8	136.5	85.4	164.5
Both Sexes	301.1	312.7	84.5	50.8	245.8	308.2	80.2	165.6
Number of persons in the sample								
Male	1,151	1,017	3,255	9,065	10,080	3,236	1,380	29,184
Female	1,124	1,074	3,173	8,610	11,125	3,153	1,172	29,431
Both Sexes	2,275	2,091	6,428	17,675	21,205	6,389	2,552	58,615

Table 13 - Prevalence Rates (per thousend) of any reported Illness(es) during the 14 days reference period, among different Literacy, sex and age groups of the population aged 10 years and above - (Round 2)

Literacy and Sex	Age in Years				
	10-14	15-44	45-64	65+	Total
Total					
Male	174.6	277.5	407.8	453.7	291.2
Female	205.9	346.9	492.7	487.9	351.6
Both Sexes	189.3	313.6	447.9	468.7	321.2
Literate					
Male	187.6	275.0	377.5	471.5	265.6
Female	238.3	294.3	509.3	1,000.0	275.1
Both Sexes	205.8	279.4	383.9	489.3	268.0
Illiterate					
Male	164.9	279.9	414.7	456.7	306.2
Female	194.6	353.9	492.6	494.2	362.6
Both Sexes	180.6	326.3	455.1	473.7	338.6
Not Stated					
Male	205.4	139.5	223.3	.0	152.7
Female	139.6	231.9	404.9	89.6	178.4
Both Sexes	186.6	180.9	291.9	56.5	163.8
Number of persons in the sample					
Male	3,788	10,080	3,236	1,380	18,484
Female	3,391	11,125	3,153	1,172	18,841
Both Sexes	7,179	21,205	6,389	2,552	37,325

Table 14 - Prevalence Rates (per thousend) of any reported Illness(es) during the 14 days reference among different educational attainment,sex and age groups of the population aged 10 years and above - (Round 2)

Highest grade Completed and Sex	Age in Years				
	10-14	15-44	45-64	65+	Total
Total					
Male	174.6	277.5	407.8	453.7	291.2
Female	205.9	346.9	492.7	487.9	351.6
Both Sexes	189.3	313.6	447.9	468.7	321.2
Literate					
Male	187.8	275.0	377.5	471.5	265.6
Female	239.6	294.8	509.3	1,000.0	276.0
Both Sexes	206.4	279.4	383.9	489.3	268.2
Grade 1-3					
Male	167.9	251.3	371.6	573.3	223.3
Female	238.5	266.2	928.8	1,000.0	253.5
Both Sexes	191.2	254.5	390.8	607.9	231.1
Grade 4-6					
Male	208.3	242.0	514.0	.0	241.3
Female	218.5	269.9	1,000.0	.0	252.5
Both Sexes	211.3	246.0	539.5	.0	243.3
Grade 7-8					
Male	61.3	180.3	569.2	.0	176.0
Female	243.2	283.1	.0	.0	274.3
Both Sexes	129.0	194.7	569.2	.0	191.8
Grade 9 & Above					
Male	.0	171.6	657.9	40.1	169.9
Female	.0	281.9	.0	.0	264.8
Both Sexes	.0	189.6	390.6	40.1	186.1

Table 14 (Contd.)

Highest grade Completed and Sex	Age in Years				
	10-14	15-44	45-64	65+	Total
Illiterate					
Male	164.9	279.9	414.7	456.7	306.2
Female	194.6	353.9	492.6	494.2	362.6
Both Sexes	180.6	326.3	455.1	473.7	338.6
Not Stated					
Male	197.5	175.1	223.3	.0	164.5
Female	98.6	213.4	404.9	89.6	159.1
Both Sexes	162.5	190.4	291.9	56.5	162.2
Number of persons in the sample					
Male	3,788	10,080	3,236	1,380	18,484
Female	3,391	11,125	3,153	1,172	18,841
Both Sexes	7,179	21,205	6,389	2,552	37,325

Table 15 - Prevalence Rates (per thousend) of having any Illness(es) during the 14 days reference period, among the different Ethnic, sex and age groups of the population in the surveyed areas - (Round 2)

Ethnic Groups	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Grand Total							
Male	342.8	283.5	184.8	277.5	407.8	453.7	274.4
Female	301.5	278.4	201.6	346.9	492.7	487.9	311.9
Both Sexes	322.2	281.0	192.9	313.6	447.9	468.7	293.0
Agew							
Male	201.4	250.7	94.9	240.4	493.1	453.7	230.3
Female	445.4	286.2	183.3	478.3	674.5	574.0	378.2
Both Sexes	345.6	270.3	144.9	371.5	587.3	409.2	312.3
Amhara							
Male	295.4	299.1	215.6	320.5	449.4	461.2	309.1
Female	278.7	290.6	236.6	377.7	519.2	468.4	341.1
Both Sexes	286.8	294.8	225.7	349.7	481.8	464.3	324.8
Dometae							
Male	424.7	547.7	75.2	116.7	441.8	721.6	244.7
Female	333.3	252.8	69.3	115.2	293.2	638.7	149.2
Both Sexes	371.4	423.5	71.6	116.0	377.0	685.5	195.0
Gamo							
Male	232.4	229.0	116.9	205.7	270.0	562.2	198.7
Female	298.1	234.4	142.8	217.3	445.5	648.7	243.1
Both Sexes	263.3	231.7	129.1	211.7	350.3	617.9	220.7
Gedaeo							
Male	432.6	196.3	113.5	332.1	250.4	581.6	243.9
Female	.0	169.3	106.7	331.6	626.5	529.5	260.1
Both Sexes	199.1	184.3	110.3	331.8	460.3	562.2	252.0
Gurage							
Male	381.1	282.2	183.9	257.8	354.5	357.4	249.9
Female	300.8	284.9	169.8	350.7	492.3	630.0	311.8
Both Sexes	338.8	283.8	177.6	306.3	428.9	490.3	281.3

Table 15 (Contd.)

Ethnic Groups	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Hadya							
Male	504.5	184.5	172.0	265.5	440.2	103.4	248.4
Female	468.2	301.4	214.8	304.2	644.8	418.0	300.3
Both Sexes	487.6	240.7	194.7	286.3	516.7	282.9	275.0
Kefa							
Male	246.6	176.1	204.2	305.5	514.2	473.3	287.2
Female	194.6	216.8	209.7	324.3	517.2	454.3	290.8
Both Sexes	222.6	201.0	206.8	315.7	515.5	466.3	289.0
Kembata							
Male	509.2	340.3	104.8	261.2	454.9	395.2	246.5
Female	353.2	492.1	163.6	313.1	641.5	450.0	313.4
Both Sexes	437.8	402.0	131.1	283.2	523.3	432.1	275.7
Oromo							
Male	346.3	272.5	184.9	254.1	375.6	451.5	262.2
Female	310.5	275.0	189.8	347.4	462.5	507.4	306.1
Both Sexes	328.8	273.7	187.3	303.4	417.0	475.4	284.1
Sidama							
Male	309.0	216.3	65.5	210.8	270.2	431.6	178.0
Female	368.6	130.4	122.8	253.7	419.8	197.9	206.8
Both Sexes	346.9	168.4	93.6	231.8	347.4	353.4	192.4
Welaitta							
Male	369.8	287.1	145.4	217.0	304.7	408.0	218.7
Female	142.7	293.0	163.8	261.7	261.6	474.4	234.5
Both Sexes	266.3	290.1	154.2	241.9	288.4	435.7	226.7

Table 15 (Contd.)

Ethnic Groups	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Others							
Male	564.0	384.3	268.1	333.2	508.9	586.0	356.1
Female	446.7	331.8	261.4	372.0	501.5	533.2	352.5
Both Sexes	507.9	359.5	264.6	353.7	505.0	561.0	354.3
Not Stated							
Male	298.7	319.1	135.2	221.1	404.7	404.1	237.0
Female	243.0	287.3	210.9	301.0	525.0	533.7	297.3
Both Sexes	279.4	303.1	171.4	262.8	460.0	464.8	266.7
Number of persons in the sample							
Male	1,151	4,272	9,065	10,080	3,236	1,380	29,184
Female	1,124	4,247	8,610	11,125	3,153	1,172	29,431
Both Sexes	2,275	8,519	17,675	21,205	6,389	2,552	58,615

8.2 - Duration of Illness and Restricted Activity.

Data on duration of illness and restricted activity were collected in order to assess the severity of illness afflicting the persons who reported that they were ill. Tables 16 (a) - 17 (a) and 16 (b) - 17 (b) show duration of illness and 18 (a) - 19 (a) and 18 (b) - 19 (b) are on duration of restricted activity during the reference period for the first and the second rounds of the Health Survey.

The tables on duration of illness show that persons were ill on the average for 9.6 days during the first round and for 9.7 days during the second round. They also show that of the total ill persons 68.1% and 69.5% were ill for 7 - 14 days during the first and second rounds, respectively. Thus most ill persons had health problems for long durations of time (7 - 14 days). As can be seen from examining these tables there are only small variations, in these values, by age, sex and type of disease groups. Victims of "conditions on the skin," "venereal diseases" and "maternal problems" seem to have suffered for the longest durations of time respectively in that order in both rounds (refer to tables 17 (a) and 17 (b)).

Coming to restrictions of activity, victims of diseases on the average experienced restriction in their activities for 6.5 days during the first round and for 5.9 days during the second round. Comparing the size of the restricted due to illness with that of the not restricted, the former is substantially larger in both rounds, 60.7% of ill persons restricted compared to 38.8% in the first round and the corresponding figures for the second round are 57.4% and 42.4%. In each of the rounds about a quarter of all persons reported ill experienced restriction of usual activity for 7 - 14 days, 25.6% in round 1 and 21.5% in round 2. As can be seen from tables 18 (a), 19 (a), 18 (b) and 19 (b) there are some variations, in these values, by age, sex and type of disease groups. Using the criterion of restriction in activity, "fevers" and "maternal problems" are the most serious.

Table 16 (a) - Percentage Distribution of persons reported having some Illness(es) during the reference period by number of days of Illness, Age and Sex - (Round 1)

Days of Illness and Sex	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
1 - 3 days							
Male	8.8	8.6	10.8	9.1	6.8	5.9	8.7
Female	5.7	9.4	11.6	9.2	4.8	2.6	8.3
Both Sexes	14.5	18.0	22.4	18.3	11.7	8.5	17.0
4 - 6 days							
Male	7.9	7.6	7.6	6.2	5.1	4.5	6.4
Female	8.6	6.9	7.7	7.6	6.1	3.7	7.1
Both Sexes	16.5	14.5	15.3	13.8	11.3	8.2	13.4
7 - 14 days							
Male	36.6	35.3	30.9	27.2	35.2	44.2	31.7
Female	29.9	30.5	29.2	39.5	41.1	37.8	36.4
Both Sexes	66.5	65.7	60.1	66.6	76.3	82.0	68.1
Not Stated							
Male	1.6	1.0	1.0	.4	.2	.4	.6
Female	.8	.8	1.2	.8	.6	1.0	.8
Both Sexes	2.5	1.8	2.2	1.2	.8	1.4	1.4
Total							
Male	54.9	52.4	50.3	42.9	47.3	55.0	47.4
Female	45.1	47.6	49.7	57.1	52.7	45.0	52.6
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of Days of Illness							
Male	8.8	9.3	8.9	9.1	10.3	11.0	9.4
Female	9.5	9.0	8.6	9.7	11.0	11.8	9.8
Both Sexes	9.1	9.1	8.8	9.4	10.7	11.3	9.6
Number of Ill Persons in the sample							
Male	317	1,162	1,662	3,216	1,431	709	8,497
Female	272	1,054	1,637	4,358	1,749	660	9,730
Both Sexes	589	2,216	3,299	7,574	3,180	1,369	18,227

Table 16 (b) - Percentage Distribution of persons reported having some Illness(es) during the reference period by number of days of Illness, Age and Sex - (Round 2)

Days of Illness and Sex	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
1 - 3 days							
Male	7.9	8.0	10.0	7.3	5.8	3.6	7.5
Female	6.6	8.4	10.3	8.4	4.4	3.3	7.7
Both Sexes	14.5	16.4	20.3	15.8	10.2	6.9	15.2
4 - 6 days							
Male	8.2	8.9	7.3	5.7	4.8	6.1	6.4
Female	10.6	9.1	8.4	8.5	4.5	2.7	7.6
Both Sexes	18.8	18.0	15.7	14.2	9.3	8.8	14.1
7 - 14 days							
Male	36.8	32.7	31.2	29.0	37.4	44.3	32.6
Female	28.9	31.1	31.3	39.9	42.4	39.2	36.8
Both Sexes	65.6	63.9	62.5	68.9	79.8	83.5	69.5
Not Stated							
Male	.4	1.0	.8	.4	.1	.4	.5
Female	.7	.8	.7	.8	.6	.3	.7
Both Sexes	1.1	1.7	1.5	1.2	.7	.8	1.2
Total							
Male	53.2	50.6	49.4	42.4	48.1	54.4	47.1
Female	46.8	49.4	50.6	57.6	51.9	45.6	52.9
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of Days of Illness							
Male	8.8	9.0	8.9	9.6	10.7	11.2	9.6
Female	8.6	8.8	8.8	9.8	11.2	11.6	9.8
Both Sexes	8.8	8.9	8.9	9.7	11.0	11.4	9.7
Number of Ill Persons in the sample							
Male	395	1,246	1,726	2,806	1,341	636	8,150
Female	358	1,223	1,780	3,962	1,580	597	9,500
Both Sexes	753	2,469	3,506	6,768	2,921	1,233	17,650

Table 17 (a) - Percentage Distribution of persons reported having some Illness(es), during the reference period, by number of days of Illness, Sex and type of groups of Illness -(Round 1)

Days of Illness and Sex	All Fevers	All Coughs	All Diarrhoea & abdominal Conditions	All Conditions on Neck and Head	All Venereal Diseases	All Conditions on the Skin	All Maternal Problems	All Others	Not Stated	Total
1 - 3 days										
Male	10.1	7.3	14.4	10.3	5.8	1.3	.0	6.0	2.9	8.7
Female	9.1	7.4	11.2	9.8	1.9	1.8	12.5	7.2	4.1	8.3
Both Sexes	19.2	14.7	25.6	20.1	7.7	3.1	12.5	13.2	6.9	17.0
4 - 6 days										
Male	7.0	9.3	8.3	5.9	6.8	2.9	.0	4.7	1.5	6.4
Female	7.7	9.3	7.3	7.0	2.3	2.1	12.8	7.3	3.6	7.1
Both Sexes	14.7	18.6	15.6	12.9	9.1	5.1	12.8	12.0	5.1	13.4
7 - 14 days										
Male	34.6	31.0	29.2	27.3	53.5	48.1	.0	31.7	12.1	31.7
Female	30.8	34.6	28.5	38.6	28.2	42.4	73.8	41.8	16.4	36.4
Both Sexes	65.4	65.6	57.7	65.9	81.7	90.5	73.8	73.6	28.5	68.1
Not Stated										
Male	.3	.5	.6	.2	.6	.4	.0	.4	33.4	.6
Female	.3	.6	.5	.9	.8	.8	1.0	.9	26.1	.8
Both Sexes	.6	1.1	1.1	1.1	1.4	1.3	1.0	1.3	59.5	1.4

Table 17 (a) (Contd.)

Days of Illness and Sex	All Fevers	All Coughs	All Diarrhoea & abdominal Conditions	All Conditions on Neck and Head	All Venereal Diseases	All Conditions on the Skin	All Maternal Problems	All Others	Not Stated	Total
Total										
Male	52.1	48.1	52.5	43.7	66.7	52.8	.0	42.8	49.8	47.4
Female	47.9	51.9	47.5	56.3	33.3	47.2	100.0	57.2	50.2	52.6
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of days of Illness										
Male	8.7	9.0	8.0	9.0	11.1	12.7	.0	10.5	10.1	9.4
Female	8.7	9.5	8.3	9.8	11.5	12.6	10.1	10.4	10.0	9.8
Both Sexes	8.7	9.3	8.2	9.4	11.2	12.6	10.1	10.4	10.0	9.6
Number of ill Persons in the sample										
Male	965	1,258	2,026	1,664	180	916	-	1,429	59	8,497
Female	934	1,336	1,913	2,286	98	846	360	1,904	53	9,730
Both Sexes	1,899	2,594	3,939	3,950	278	1,762	360	3,333	112	18,227

Table 17 (b) - Percentage Distribution of persons reported having some Illness(es) during the reference period, by number of days of Illness, Sex and type of groups of Illness - (Round 2)

Days of Illness and Sex	All fevers	All coughs	All Diarrhoea & abdominal Conditions	All Conditions on Neck and Head	All Venereal Diseases	All Conditions on the skin	All Maternal Problems	All Others	Not Stated	Total
1 - 3 days										
Male	9.4	8.5	11.8	8.1	2.9	1.0	.0	5.5	3.0	7.5
Female	7.3	8.3	10.4	10.1	2.7	1.0	10.8	5.5	5.8	7.7
Both Sexes	16.7	16.8	22.2	18.2	5.6	2.0	10.8	10.8	8.9	15.2
4 - 6 days										
Male	8.5	9.1	8.4	6.5	4.6	2.1	.0	3.8	3.6	6.4
Female	8.1	10.4	9.7	8.0	1.2	1.9	14.7	5.2	2.7	7.6
Both Sexes	16.6	19.4	18.1	14.5	5.8	4.0	14.7	9.0	6.2	14.1
7 - 14 days										
Male	36.4	30.4	29.0	28.8	49.8	48.4	.0	35.7	14.7	32.6
Female	29.1	32.5	30.1	37.9	38.2	44.4	73.2	43.7	24.7	36.8
Both Sexes	65.5	62.9	59.1	66.7	88.0	92.8	73.2	79.4	39.3	69.5
Not Stated										
Male	.6	.2	.2	.2	.5	.8	.0	.2	22.6	.5
Female	.5	.6	.3	.4	.0	.4	1.3	.6	22.9	.7
Both Sexes	1.2	.8	.5	.6	.5	1.2	1.3	.8	45.6	1.2

Table 17 (b) (Contd.)

Days of Restricted Activity and Sex	All fevers	All coughs	All Diarrhoea & abdominal Conditions	All Conditions on Neck and Head	All Venereal Diseases	All Conditions on the skin	All Maternal Problems	All Others	Not Stated	Total
Total										
Male	54.9	48.2	49.4	43.5	57.9	52.3	.0	45.0	43.9	47.1
Female	45.1	51.8	50.6	56.5	42.1	47.7	100.0	55.0	56.1	52.9
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of days of Illness										
Male	9.0	8.5	8.3	9.3	12.0	12.8	.0	10.9	9.8	9.6
Female	9.0	8.7	8.5	9.4	12.5	12.8	10.2	11.1	9.6	9.8
Both Sexes	9.0	8.6	8.4	9.4	12.2	12.8	10.2	11.0	9.7	9.7
Number of ill persons in the sample										
Male	814	1,599	1,626	1,772	150	906	-	1,213	70	8,150
Female	685	1,743	1,744	2,409	105	812	343	1,570	89	9,500
Both Sexes	1,499	3,342	3,370	4,181	255	1,718	343	2,783	159	17,650

Table 18 (a) - Percentage Distribution of persons reported having some Illness(es) during the reference period by number of days of restricted acrivity due to Illness age and Sex - (Round 1)

Days of Restricted Activity and Sex	Age In Years						
	Ubder 1	1-4	5-14	15-44	45-64	65+	Total
None							
Male	19.1	20.5	21.8	15.8	17.5	17.7	18.0
Female	15.2	18.4	21.5	21.7	21.6	17.5	20.8
Both Sexes	34.2	38.9	43.3	37.5	39.1	35.2	38.8
1 - 3 days							
Male	10.3	11.4	11.9	11.9	10.6	9.4	11.4
Female	7.6	10.7	11.8	12.4	9.4	4.6	10.9
Both Sexes	17.9	22.1	23.7	24.3	20.0	14.0	22.3
4 - 6 days							
Male	8.6	6.5	6.0	5.8	5.9	6.3	6.1
Female	6.7	5.5	6.3	7.6	6.6	4.6	6.7
Both Sexes	15.4	11.9	12.4	13.4	12.5	10.9	12.8
7 - 14 days							
Male	16.7	13.7	10.1	9.3	13.2	21.3	11.7
Female	15.5	12.7	9.5	15.0	14.9	17.7	13.9
Both Sexes	32.2	26.4	19.6	24.3	28.0	39.0	25.6
Not Stated							
Male	.2	.3	.4	.1	.1	.2	.2
Female	.1	.3	.6	.3	.2	.6	.4
Both Sexes	.3	.6	1.0	.5	.3	.8	.6

Table 18 (a) (Contd.)

Days of Restricted Activity and Sex	Age In Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Total							
Male	54.9	52.4	50.3	42.9	47.3	55.0	47.4
Female	45.1	47.6	49.7	57.1	52.7	45.0	52.6
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of days of restricted activity							
Male	6.9	6.5	5.9	5.6	6.8	8.0	6.2
Female	7.9	6.7	5.8	6.4	7.2	8.9	6.7
Both Sexes	7.3	6.6	5.8	6.1	7.0	8.4	6.5
Number of ill persons in the sample							
Male	317	1,162	1,662	3,216	1,431	709	8,497
Female	272	1,054	1,637	4,358	1,749	660	9,730
Both Sexes	589	2,216	3,299	7,574	3,180	1,369	18,227

Table 18 (b) - Percentage Distribution of persons reported having some Illness(es) during the reference period by number of days of restricted activity due to Illness, Age and Sex- (Round 2)

Days of Restricted Activity and Sex	Age In Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
None							
Male	18.1	23.0	24.1	18.0	20.1	17.9	20.3
Female	19.3	19.0	23.0	23.8	22.5	17.0	22.1
Both Sexes	37.4	42.0	47.1	41.8	42.6	34.9	42.4
1 - 3 days							
Male	11.8	10.6	12.6	11.4	10.4	9.6	11.3
Female	9.5	11.9	13.7	14.3	9.7	7.5	12.5
Both Sexes	21.3	22.5	26.3	25.7	20.1	17.1	23.7
4 - 6 days							
Male	8.0	6.0	5.4	4.8	5.8	7.3	5.5
Female	7.6	7.1	5.2	7.7	6.4	3.8	6.7
Both Sexes	15.6	13.1	10.6	12.5	12.2	11.1	12.2
7 - 14 days							
Male	15.1	10.9	7.3	8.2	11.7	19.6	10.0
Female	10.4	11.3	8.7	11.7	13.2	17.2	11.6
Both Sexes	25.5	22.2	15.9	19.9	25.0	36.8	21.5
Not Stated							
Male	.2	.1	.0	.0	.0	.0	.0
Female	.0	.2	.1	.0	.0	.1	.1
Both Sexes	.2	.2	.1	.1	.0	.1	.1

Table 18 (b) (Contd.)

Days of Restricted Activity and Sex	Age In Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Total							
Male	53.2	50.6	49.4	42.4	48.1	54.4	47.1
Female	46.8	49.4	50.6	57.6	51.9	45.6	52.9
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of days of restricted activity							
Male	6.2	6.0	5.0	5.6	6.4	7.9	5.9
Female	5.9	5.8	5.1	5.6	6.6	8.1	5.9
Both Sexes	6.1	5.9	5.0	5.6	6.5	8.0	5.9
Number of ill persons in the sample							
Male	395	1,246	1,726	2,806	1,341	636	8,150
Female	358	1,223	1,780	3,962	1,580	597	9,500
Both Sexes	753	2,469	3,506	6,768	2,921	1,233	17,650

Table 19 (a) - Percentage Distribution of persons having some Illness(es) during the 14 days reference period by type of groups of Illness, Sex and number of days of restricted activity due to Illness - (Round 1)

Days of Restricted Activity and Sex	All fevers	All coughs	All Diarrhoea & abdominal Conditions	All Conditions on Neck and Head	All Venereal Diseases	All Conditions on the skin	All Maternal Problems	All Others	Not Stated	Total
None										
Male	10.3	18.1	18.1	19.0	24.6	29.2	.0	16.2	32.1	18.0
Female	11.2	20.3	17.5	23.9	15.6	24.9	29.8	24.0	26.0	20.8
Both Sexes	21.5	38.5	35.5	42.9	40.1	54.1	29.8	40.2	58.2	38.8
1 - 3 days										
Male	12.8	11.8	15.4	11.1	16.1	6.7	.0	9.4	5.5	11.4
Female	11.5	11.1	11.6	12.4	6.5	4.7	19.2	10.7	10.5	10.9
Both Sexes	24.2	22.9	27.0	23.5	22.6	11.4	19.2	20.1	16.0	22.3
4 - 6 days										
Male	9.5	6.4	7.3	5.3	9.4	4.0	.0	4.8	1.3	6.1
Female	8.8	6.7	6.6	6.5	2.2	4.6	14.9	6.6	1.4	6.7
Both Sexes	18.3	13.1	13.9	11.8	11.6	8.7	14.9	11.4	2.7	12.8
7 - 14 days										
Male	19.2	11.6	11.5	8.1	16.6	12.7	.0	12.3	3.8	11.7
Female	16.2	13.6	11.6	13.1	8.2	12.7	35.7	15.5	6.8	13.9
Both Sexes	35.4	25.3	23.0	21.3	24.8	25.3	35.7	27.8	10.6	25.6

Table 19 (a) (Contd.)

Days of Restricted Activity and Sex	All fevers	All coughs	All Diarrhoea & abdominal Conditions	All Conditions on Neck and Head	All Venereal Diseases	All Conditions on the skin	All Maternal Problems	All Others	Not Stated	Total
Not Stated										
Male	.3	.1	.2	.1	.0	.1	.0	.1	7.0	.2
Female	.2	.2	.3	.5	.8	.3	.4	.4	5.4	.4
Both Sexes	.5	.3	.5	.6	.8	.5	.4	.5	12.4	.6
Total										
Male	52.1	48.1	52.5	43.7	66.7	52.8	.0	42.8	49.8	47.4
Female	47.9	51.9	47.5	56.3	33.3	47.2	100.0	57.2	50.2	52.6
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of days of restricted activity										
Male	6.7	6.1	5.4	5.5	6.2	7.8	.0	7.1	5.9	6.2
Female	6.7	6.7	6.1	6.3	6.7	8.2	7.6	6.9	5.4	6.7
Both Sexes	6.7	6.4	5.7	6.0	6.3	8.0	7.6	7.0	5.6	6.5
Number of ill persons in the sample										
Male	965	1,258	2,026	1,664	180	916	-	1,429	59	8,497
Female	934	1,336	1,913	2,286	98	846	360	1,904	53	9,730
Both Sexes	1,899	2,594	3,939	3,950	278	1,762	360	3,333	112	18,227

Table 19 (b) - Percentage Distribution of persons having some Illness(es) during the 14 days reference period by type of groups of Illness, sex and number of days of restricted activity due to Illness - (Round 2)

Days of Restricted Activity and Sex	All fevers	All coughs	All Diarrhoea & abdominal Conditions	All Conditions on Neck and Head	All Venereal Diseases	All Conditions on the skin	All Maternal Problems	All Others	Not Stated	Total
None										
Male	14.7	21.2	19.8	19.1	24.6	31.5	.0	18.3	28.7	20.3
Female	9.7	22.9	19.3	24.1	25.4	27.1	30.9	23.2	30.7	22.1
Boths Sexes	24.4	44.1	39.1	43.2	50.0	58.6	30.9	41.5	59.4	42.4
1 - 3 days										
Male	14.8	12.0	14.1	11.3	13.8	7.2	.0	9.1	6.9	11.3
Female	11.2	13.3	13.9	14.9	6.5	5.8	18.0	11.3	9.8	12.5
Both Sexes	25.9	25.4	28.1	26.3	20.3	13.0	18.0	20.4	16.6	23.7
4 - 6 days										
Male	9.7	6.2	6.4	4.9	6.6	3.7	.0	4.6	.4	5.5
Female	8.9	6.3	7.0	7.0	3.9	3.8	16.5	6.4	3.1	6.7
Both Sexes	18.5	12.5	13.3	11.9	10.5	7.5	16.5	11.0	3.5	12.2
7 - 14 days										
Male	15.8	8.8	9.1	8.1	12.9	9.8	.0	13.0	7.0	10.0
Female	15.4	9.2	10.3	10.3	6.3	10.9	34.6	14.1	12.5	11.6
Both Sexes	31.2	18.0	19.4	18.4	19.2	20.6	34.6	27.1	19.5	21.5

Table 19 (b) (Contd.)

Days of Restricted Activity and Sex	All fevers	All coughs	All Diarrhoea & abdominal Conditions	All Conditions on Neck and Head	All Venereal Diseases	All Conditions on the skin	All Maternal Problems	All Others	Not Stated	Total
Not Stated										
Male	.0	.0	.0	.1	.0	.1	.0	.0	.9	.0
Female	.0	.0	.0	.2	.0	.1	.0	.0	.0	.1
Both Sexes	.0	.0	.0	.2	.0	.2	.0	.0	.9	.1
Total										
Male	54.9	48.2	49.4	43.5	57.9	52.3	.0	45.0	43.9	47.1
Female	45.1	51.8	50.6	56.5	42.1	47.7	100.0	55.0	56.1	52.9
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of days of restricted activity										
Male	6.1	5.4	5.1	5.5	6.1	6.9	.0	7.3	6.1	5.9
Female	6.5	5.2	5.4	5.2	6.2	7.3	7.1	6.7	6.6	5.9
Both Sexes	6.3	5.3	5.3	5.3	6.2	7.1	7.1	7.0	6.4	5.9
Number of ill persons in the sample										
Male	814	1,599	1,626	1,772	150	906	-	1,213	70	8,150
Female	685	1,743	1,744	2,409	105	812	343	1,570	89	9,500
Both Sexes	1,499	3,342	3,370	4,181	255	1,718	343	2,783	159	17,650

8.3 - Sanitary Facilities and Practices and their Impact on Health Condition.

Sanitary and hygienic practices play a major role in the maintainance of good health. Data on the availability of sanitary facilities, namely latrine, siutable source of water supply and refuse disposal and on sanitary practices, namely keeping domestic animals away from rooms or houses where members of households stay during nights, using protected water and place of defecation were collected in both rounds of the Health Survey in order to see how widespread they are and to relate them to the health conditions of persons. Tables 20 (a) - 23 (a) and 25 (a) - 27 (a) and tables 20 (b) - 23 (b), 24 and 25 (b) - 27 (b) are all tables showing the availability of sanitary facilities and practices and their impact on the health condition of persons during the first and second rounds.

According to tables 20 (a) and 20 (b), given combined in one page, there is hardly any difference in the proportions of persons and households usually using protected[10] water between the first and secondrounds:- Only 6.3% of the population, and 6.0% of the households for the first round and 6.1% of the population and 5.9% of the households for the second round.

Percentage distributions of persons and households by usual types of source of water supply are also indicated in the same table for each of the rounds. As expected there is hardly any difference in value between the distributions of persons and households in both rounds. The percentages of households usually getting their water supply from pipes, wells, springs, rivers and lakes or ponds are 5.2, 51.6, 35.5, 1.4 and 2.9 respectively for the first round and 6.0, 53.5, 33.8, 1.6 and 2.4, respectively for round 2 and the corresponding percentages for persons are not much different.

However, there is some difference in the proportion of persons and households using piped water between the first

(5.3% and 5.2%,respectively) and second (6.2% and 6.0%,respectively) rounds in favour of the second round. The reason for this probably lies in the fact /that the first round having been taken during the rainy season, some households, which used piped water during the second round, might have found it more convinient to collect water from springs and lakes or ponds, or it may well be that there were more piped water facilities during the second round than during the first due to installation of more piped water facilities during the interval. This is supported by the fact that the proportions of persons and households collecting water from springs and lakes or ponds are higher during the first round than during the second. The fact that the proportions of persons and households reported to be using protected water and collecting their water supply from pipes are close to each other in each round may suggest that those using protected water were mostly those collecting piped water.

That the proportions of persons and households to whom latrine is available have been reported to be more in the first round than in the second round, i.e. 8.9% of the population and 8.3% of households for the first and 7.4% of the population and 6.8% of households for the second round, is difficult to explain. Normally the opposite should be expected as there ought to have been on-going latrine digging and preparation activities as part of the primary health care programme. It may well be that latrines were relatively under-reported during the second.

What has been said above for latrine is true for refuse disposal except that the proportions are much lower (i.e. 2.6% of the population and 2.3% of households for the first round and 1.9% of the population and 1.7% of households for the second round). In conclusion the proportion of persons and households to whom basic sanitary facilities were available are very small. Especially the number of those to whom refuse disposal was available is almost negligible.

Distribution of households by availability of certain sanitary facilities in each region are shown in tables 21(a) for round 1 and 21 (b) for round 2. It will be observed from these tables that there are great variations among the regions in the availability of these facilities in both rounds. Usage of protected water varies from as high as 12.2% of all households in Arssi and Gonder to as low as 0.6% in Kefa for round 1 and from 13.7% again in Arssi to 0.8% in Wellega in the second round. The corresponding percentages for availability of "piped water" range from 18.7 in Bale to 1.1 in Wellega in round 1 and from 17.8 again in Bale to 0.6 in Gojjam in round 2, of "latrines" from 31.8 in Kefa to 0.4 in Gojjam in the first round and from 31.5 in Bale to 0.3 in Gojjam in round 2 and of "refuse disposal" from 8.0 in Bale to 0.2 in Gojjam in round 1 and from 17.6 in Bale to 0.2 in Gojjam in round 2.

Tables 22 (a) and 22 (b) show that 7.7% and 6.6% of the total population defecate in latrines most of the time in the first and second rounds respectively. There are substantial variations in these values within each of the rounds by age, these values being small at the youngest ages, generally increasing with increasing ages till the age groups of 15 - 44 and 45 - 64 respectively after which they remain more or less constant. This trend is generally true for both sexes. These values are slightly higher for males than for females for almost all age groups except for the broad age group 15 -44 years. This does not conform with expectations because one expects women to stay in or near their houses substantially more than male members of households and since latrines are built very near to houses it seems likely that more women would use the latrines than men. Therefore either relative over - reporting on the part of males or relative under - reporting as regards females cannot be ruled out.

That a larger proportion of the rural population should be reported as using latrines during the first round than during the second conforms with expectations when considered in conjunction

with the former finding that more households were reported as having latrines during the first round than during the second. So either the explanation given above for the case of reporting more latrines in the first than in the second round is true and/ or that the rain during the rainy season (when the first round was carried out) inhibited some persons from defecating outside the latrine is true.

Most of the population not using latrines has been reported to defecate "anywhere far from houses", 49.6% and 50.2% of the total population in the first and second rounds, respectively. As regards the remaining, 38.6% and 40.4% of the total population have been reported to defecate in the backyard in the first and second rounds, respectively and the rest in each round which are very small use other facilities. In both rounds most of those reported to be defecating at "far away places from houses" are adults and youths while most of those using the backyard are infants and young children. Percentage distributions of persons by place of usual defecation, sex and region are shown in Table 23 (a) for round 1 and Table 23 (b) for the second round. It can be seen that in each of six regions, namely Hararge, Wollo, Arssi, Bale, Illubabor and Shoa, more than half (i.e. 64.5%, 62.9%, 61.5%, 61.4%, 61.2% and 57.9%, respectively) of the total populations usually defecate in places far from houses in round 1 and similar situations prevail in round 2 in each of five regions, namely Wollo, Hararge, Illubabor, Arssi and Shoa, with 69.9%, 68.1%, 67.8%, 62.4% and 54.9%, respectively usually defecating in far places from houses. These regions are almost the same for both rounds except Bale where the percentage is substantially lower in the second round than in the first which has been compensated by a considerable rise in the percentage using latrines, from 20.2% in the first to 31.3% in the second round. The proportions defecating in places far from houses are generally high in most regions in both rounds.

The proportion of the population defecating at the backyard is very high in Gojjam in both rounds (71.1% in the first and 72.4% in the second round) and quite high in Gonder (52.9%)

in the second round. The values of the proportions defecating at the backyard are not so high in most of the remaining regions in both rounds.

The proportions of the populations usually using latrines are of considerable magnitude only in Kefa (30.9%), Sidamo (24.6%), Bale (20.2%) and Gamo Gofa (17.0%) in the first round and in Bale (31.3%), Kefa (27.3%), Sidamo (21.0%) and Gamo Gofa (11.9%) in the second round. That is usage of latrine is appreciably important only in the same four regions in each of the rounds, there being only a difference of ordering by rank between the rounds.

Table 24 shows "percentage of households in which animals (domestic) spend nights in rooms or houses with members by educational status of head of household" for the second round. It is clear, from examining this table, that the proportions of households in which animals spend nights are very high for all levels of educational attainment of heads of households, the percentage for the total population being 77.6. Moreover, according to this table the impact of education on not having domestic animals spend nights with household members in rooms or houses becomes apparent only for educational attainment of completing grade 9 or above and the impact even at this level is not strikingly high. There is almost no difference or there is very little difference in the magnitude of the percentage of households in which animals do not spend nights with members between households whose heads are illiterate and whose heads have completed any grade below 9. Difference in this percentage becomes noticeable only if the heads of households have completed grades 9 and above.

Now turning to the impact of availability of sanitary facilities and practices on health condition it could be said from the outset, that as it has been reported there are few sanitary facilities and little sanitary practices, the impact of their availability on the health condition of the population should be little if any.

But as can be seen from tables 25 (a) and 25 (b), presented combined, prevalence rates of having any disease(s) are significantly higher for each sex among those not using protected water, to whom latrine and refuse disposal are not available than among those using protected water and to whom latrine and refuse disposal are available in both rounds. This is especially more true for the second round than for the first. However, since the part of the population using these facilities is very small the impact of having these sanitary facilities and practices on the health condition of the total rural population must be very little.

Tables 26 (a) and 26 (b) show percentages of persons reported ill by place of defecation for rounds 1 and 2, respectively. The percentage of persons reported ill among those who use latrines is generally lower than among those who defecate in places far from houses as well as than those who defecate at the backyard in both rounds. However the differences are not that great to support firm conclusions. Moreover it is not clear why members of some households to whom latrine facility is not available have been reported as using latrines. It could be conjectured either that they used neighbours' latrines or there was some misreporting.

Finally strangely enough tables 27 (a) and 27 (b), given combined in one page, show that prevalence rates of having any illness(es) have been reported to be higher among those belonging to households with whose members domestic animals do not stay during night than among those belonging to households with whose members animals spend nights for both rounds.

Tables 20 (a) and 20 (b) Combined - Percentage Distribution of persons and households by availability of certain Sanitary Facilities - (Rounds 1 & 2)

Sanitary Facilities	First Round		Second Round	
	Population	Households	Population	Households
Protected water				
usually using	6.3	6.0	6.1	5.9
Not usually using	92.9	93.3	93.4	93.6
Not stated	.7	.7	.5	.5
Total	100.0	100.0	100.0	100.0
Type of Water Supply				
Pipe	5.3	5.2	6.2	6.0
Well	51.3	51.6	53.1	53.5
Spring	35.7	35.5	34.0	33.8
River	1.3	1.4	1.7	1.6
Lake or pand	3.2	2.9	2.5	2.4
Not stated	3.2	3.4	2.6	2.7
Total	100.0	100.0	100.0	100.0
Latrine				
Available	8.9	8.3	7.4	6.8
Not available	90.6	91.2	92.2	92.8
Not stated	.5	.5	.4	.4
Total	100.0	100.0	100.0	100.0
Refuse Disposal				
Available	2.6	2.3	1.9	1.7
Not available	96.7	97.0	97.7	97.8
Not stated	.7	.7	.4	.4
Total	100.0	100.0	100.0	100.0
Number of persons & households in the sample	59,719	13,256	58,615	12,982

Table 21 (a) - Percentage Distribution of households by availability of certain Sanitary Facilities and Region - (Round 1)

Sanitary Facilities	Arssi	Bale	Gamo Gofa	Gojjam	Gonder	Hararge	Illubabor	Kefa	Shoa	Sidamo	Wellega	Wollo	Total
Protected Water													
Usuallyusing	12.2	10.3	3.4	.9	12.2	9.2	5.9	.6	3.0	10.5	8.2	6.0	6.0
Not usually using	87.4	89.5	95.3	98.6	87.0	90.4	92.3	99.1	95.7	89.1	91.2	94.0	93.3
Not stated	.4	.2	1.4	.5	.9	.4	1.8	.3	1.3	.5	.6	.0	.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Type of Water Supply													
Pipe	12.7	18.7	3.8	1.2	2.0	6.0	3.9	3.5	5.4	13.4	1.1	2.0	5.2
Well	34.5	20.4	48.0	57.7	54.8	62.9	66.9	55.9	46.4	32.0	55.9	68.4	51.6
Spring	40.5	54.2	43.4	38.9	40.2	14.2	26.6	38.4	36.6	41.2	42.5	24.3	35.5
River	1.6	.0	.3	.0	1.9	2.7	.0	.2	1.4	.3	.0	5.1	1.4
Lake or pond	6.2	6.6	.1	2.1	.6	3.9	.1	.3	8.1	.0	.0	.0	2.9
Not stated	4.5	.2	4.4	.1	.5	10.4	2.6	1.6	2.2	13.1	.5	.2	3.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Latrine													
Available	13.9	22.0	17.1	.4	1.3	7.0	8.4	31.8	1.5	25.1	6.1	3.5	8.3
Not available	95.8	78.0	81.9	99.5	98.0	93.0	89.9	67.8	97.4	74.6	93.8	96.5	91.2
Not stated	.4	.0	1.0	.1	.7	.0	1.7	.3	1.1	.3	.0	.0	.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Refuse Disposal													
Available	3.2	8.0	.7	.2	.9	6.1	2.0	7.9	.8	1.8	1.2	3.3	2.3
Not available	96.5	91.8	98.1	99.6	98.1	93.2	96.0	91.7	98.1	97.7	98.4	96.7	97.0
Not stated	.3	.2	1.2	.2	.9	.6	2.0	.4	1.2	.6	.4	.0	.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of households in the sample	921	931	872	987	1,073	923	904	940	2,498	868	1,376	963	13,256

Table 21 (b) - Percentage Distribution of households by availability, of certain Sanitary Facilities and Region (Round 2)

Sanitary Facilities	Arssi	Bale	Gamo Gofa	Gojjam	Gonder	Hararge	Illubabor	Kefa	Shoa	Sidamo	Wellega	Wollo	Total
Protected Water													
Usually using	13.7	13.0	9.2	.9	8.3	3.4	6.1	4.2	4.7	11.7	.8	7.1	5.9
Not usually using	85.2	86.9	89.8	98.8	91.7	96.0	93.2	95.3	94.5	88.0	98.6	92.7	93.6
Not stated	1.1	.0	1.0	.3	.0	.7	.7	.5	.8	.3	.6	.2	.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Type of Water													
Supply													
Pipe	13.3	17.8	2.5	.6	1.5	5.0	3.5	3.9	7.8	13.7	3.3	3.8	6.0
Well	37.8	25.3	44.5	60.4	57.2	68.1	68.3	60.5	48.6	35.1	59.7	63.6	53.5
Spring	36.7	46.2	48.4	36.8	39.0	16.8	27.4	33.6	33.2	42.0	35.4	25.3	33.8
River	1.8	2.3	1.4	.0	1.2	2.2	.0	.0	1.3	.7	.2	6.8	1.6
Lake or pond	5.7	7.7	.1	1.9	1.1	1.8	.0	.0	6.6	.0	.2	.0	2.4
Not stated	4.7	.7	3.0	.3	.0	6.1	.8	2.1	2.4	8.4	1.2	.5	2.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Latrine													
Available	2.7	31.5	13.8	.3	1.7	.6	8.3	28.8	1.3	18.8	6.9	2.5	6.8
Not available	97.1	68.5	85.6	99.2	98.2	98.8	91.3	70.7	98.1	80.7	92.7	97.5	92.8
Not stated	.2	.0	.6	.5	.1	.6	.4	.5	.7	.5	.4	.0	.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Refuse Disposal													
Available	2.2	17.6	.5	.2	.4	1.3	4.0	6.3	1.2	1.1	.6	1.7	1.7
Not available	97.1	82.4	98.9	99.4	99.4	98.1	95.2	93.1	98.2	98.6	99.0	98.1	97.8
Not stated	.7	.0	.5	.5	.2	.6	.9	.6	.6	.3	.4	.2	.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of households in the sample	924	901	801	988	1,016	914	860	940	2,479	842	1,363	954	12,982

Table 22 (a) - Percentage Distribution of persons by place where they usually Defecate, Age-groups and Sex- (Round 1)

Place of Defecation and Sex	Age Groups						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Any where far from house							
Male	6.8	11.7	27.0	30.6	33.4	36.7	26.3
Female	5.9	10.4	23.5	29.3	26.2	22.9	23.3
Both Sexes	12.7	22.0	50.5	59.9	59.6	59.6	49.6
At the Back-yard							
Male	29.8	32.8	18.8	11.6	12.3	12.5	17.7
Female	30.8	32.7	19.7	17.4	17.1	17.6	20.9
Both Sexes	60.6	65.5	38.5	29.0	29.4	30.1	38.6
In the Latrine							
Male	1.8	2.5	4.3	4.0	4.5	5.2	3.9
Female	1.7	2.2	4.2	4.6	3.7	2.2	3.8
Both Sexes	3.5	4.7	8.4	8.6	8.2	7.4	7.7
Other							
Male	10.1	2.9	.9	1.3	1.6	1.6	1.8
Female	10.7	3.0	.3	.2	.2	.1	1.0
Both Sexes	20.8	5.9	1.3	1.5	1.8	1.7	2.8
Not Stated							
Male	1.3	.8	.7	.4	.5	.7	.6
Female	1.1	1.1	.6	.5	.5	.6	.7
Both Sexes	2.4	1.9	1.3	1.0	1.0	1.3	1.3
Total							
Male	49.8	50.6	51.7	48.0	52.4	56.6	50.4
Female	50.2	49.4	48.3	52.0	47.6	43.4	49.6
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of persons in the sample	2,207	9,004	17,795	21,638	6,475	2,600	59,719

Talbe 22 (b) - Percentage Distribution of Persons by place where they usually Defecate, Age-groups and Sex - (Round 2)

Place of Defecation and Sex	Age Groups						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Any where far from house							
Male	5.6	9.2	27.3	31.7	35.5	38.0	26.7
Female	5.0	8.8	22.9	30.4	27.4	23.9	23.4
Both Sexes	10.6	18.0	50.2	62.1	62.9	61.9	50.2
At the Back-yard							
Male	31.2	36.3	19.7	11.9	12.1	12.1	18.6
Female	33.9	35.8	21.4	17.5	15.8	16.8	21.8
Both Sexes	65.1	72.0	41.1	29.4	28.0	28.9	40.4
In the Latrine							
Male	1.1	1.9	3.7	3.5	4.4	5.0	3.4
Female	1.1	1.8	3.6	3.8	3.5	2.2	3.2
Both Sexes	2.2	3.7	7.3	7.2	7.9	7.2	6.6
Other							
Male	11.4	2.4	.4	.5	.4	.4	1.1
Female	9.5	2.9	.2	.1	.1	.3	.9
Both Sexes	20.9	5.3	.6	.6	.5	.7	2.1
Not Stated							
Male	.7	.4	.5	.3	.4	.6	.4
Female	.4	.5	.3	.4	.3	.6	.4
Both Sexes	1.1	.9	.8	.7	.7	1.2	.8
Total							
Male	50.0	50.1	51.5	47.9	52.8	56.2	50.3
Female	50.0	49.9	48.5	52.1	47.2	43.8	49.7
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of persons in the sample	2,275	8,519	17,675	21,205	6,389	2,552	58,615

Table 23 (a) - Percentage Distribution of persons by place where they usually defecate, sex and Region - (Round 1)

Place of Defecation	Arssi	Bale	Gamo Gofa	Gojjam	Gonder	Hararge	Illubabor	Kefa Sidamo	Shoa	Sidamo	Wellega	Wollo	Total
Any where far from house													
Male	31.7	30.3	25.0	15.2	27.6	34.3	30.7	22.4	30.6	16.0	21.5	32.8	26.3
Female	29.8	31.1	23.7	12.4	18.8	30.2	30.5	20.0	27.2	15.7	18.1	30.1	23.3
Both Sexes	61.5	61.4	48.7	27.5	46.4	64.5	61.2	42.4	57.9	31.7	39.6	62.9	49.6
At the Back-Yard													
Male	16.8	8.7	14.5	32.7	21.9	10.8	12.9	10.8	16.6	21.5	15.7	14.8	17.7
Female	15.7	8.9	16.7	38.4	26.3	13.8	14.5	11.7	19.5	20.6	27.3	17.2	20.9
Both Sexes	32.5	17.6	31.2	71.1	48.3	24.6	27.4	22.4	36.1	42.0	43.0	32.0	38.6
In the Latrine													
Male	1.4	9.8	8.0	.1	.3	2.6	3.5	15.5	1.0	12.5	3.0	1.3	3.9
Female	1.0	10.4	9.0	.0	.6	2.3	3.6	15.3	.7	12.1	3.6	1.1	3.8
Both Sexes	2.4	20.2	17.0	.1	.8	4.9	7.1	30.9	1.6	24.6	6.6	2.4	7.7
Other													
Male	1.0	.2	1.2	.3	2.1	1.8	1.4	1.5	1.2	.1	9.2	1.6	1.8
Female	1.2	.3	1.1	.2	1.3	1.7	1.4	1.3	1.4	.3	1.1	.9	1.0
Both Sexes	2.1	.5	2.3	.5	3.4	3.4	2.8	2.8	2.6	.3	10.3	2.5	2.8
Not Stated													
Male	.8	.1	.5	.2	.7	1.2	.7	.8	.9	.5	.3	.1	.6
Female	.7	.1	.3	.6	.5	1.4	.7	.7	.9	.9	.2	.1	.7
Both Sexes	1.5	.3	.8	.8	1.1	2.6	1.5	1.5	1.8	1.4	.5	.2	1.3
Total													
Male	51.6	49.1	49.1	48.4	52.5	50.7	49.3	50.9	50.4	50.5	49.7	50.6	50.4
Female	48.4	50.9	50.9	51.6	47.5	49.3	50.7	49.1	49.6	49.5	50.3	49.4	49.6
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of persons in the sample	4,545	4,303	3,894	4,123	5,063	4,218	3,884	4,104	11,106	3,964	6,439	4,076	59,719

Table 23 (b) - Percentage Distribution of persons by place where they usually defecate, sex and Region (Round 2)

Place of Defecation	Arssi	Bale	Gamo Gofa	Gojjam	Gonder	Hararge	Illubabor	Kefa	Shoa	Sidamo	Wellega	Wollo	Total
Any where far from house													
Male	32.0	24.3	24.8	13.6	27.2	35.4	33.9	24.9	29.3	16.4	25.5	36.5	26.7
Female	30.4	24.5	23.5	12.2	16.5	32.7	33.9	22.7	25.6	15.6	19.1	33.5	23.4
Both Sexes	62.4	48.8	48.2	25.8	43.6	68.1	67.8	47.5	54.9	32.0	44.7	69.9	50.2
At the Back-yard													
Male	17.2	9.0	16.8	34.6	23.1	11.5	9.8	9.5	19.1	23.0	16.5	11.8	18.6
Female	16.4	10.0	20.9	37.8	29.8	14.0	11.7	12.0	21.8	23.2	26.4	14.4	21.8
Both Sexes	33.6	19.0	37.6	72.4	52.9	25.4	21.5	21.5	40.9	46.3	42.9	26.2	40.4
In the latrine													
Male	1.0	15.5	5.5	.2	.2	.6	3.5	14.5	.8	10.6	3.2	.8	3.4
Female	.7	15.8	6.4	.2	.3	.5	3.2	12.7	.5	10.4	3.9	.8	3.2
Both Sexes	1.7	31.3	11.9	.5	.5	1.1	6.8	27.3	1.2	21.0	7.0	1.6	6.6
Other													
Male	.8	.1	1.2	.1	1.1	2.1	1.5	1.3	1.1	.1	4.1	.6	1.1
Female	1.0	.3	.7	.1	.7	1.6	1.1	.9	1.4	.1	1.0	1.3	.9
Both Sexes	1.9	.4	1.9	.2	1.7	3.8	2.5	2.1	2.5	.2	5.1	1.8	2.1
Not Stated													
Male	.3	.2	.1	.6	.8	.9	.6	.7	.3	.2	.2	.2	.4
Female	.2	.3	.2	.6	.4	.7	.8	.8	.3	.2	.1	.2	.4
Both Sexes	.5	.5	.4	1.1	1.2	1.5	1.4	1.6	.6	.4	.3	.4	.8
Total													
Male	51.2	49.1	48.4	49.1	52.4	50.5	49.3	50.9	50.5	50.4	49.6	49.9	50.3
Female	48.8	50.9	51.6	50.9	47.6	49.5	50.7	49.1	49.5	49.6	50.4	50.1	49.7
Both Sexes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of persons in the Sample	4,553	4,149	3,638	4,256	4,713	4,158	3,727	4,086	11,047	3,889	6,411	3,988	58,615

Table 24 - Percentage of households in which Animals spend nights in rooms or houses with members by educational status of head of household-(Round 2)

Highest Grade Completed	Status of Domestic Animals Spending nights with members				Number of households in the sample
	Spend nights with members	Do not spend nights with members	Not Stated	Total	
Literate					
Not definable by level	73.6	26.1	.3	100.0	1,826
1 - 6	76.7	22.9	.4	100.0	975
7 - 8	78.9	21.1	.0	100.0	56
9 and above	68.2	31.8	.0	100.0	105
Total	74.6	25.0	.3	100.0	2,962
Illiterate	78.5	21.0	.5	100.0	9,988
Not Stated	69.7	30.3	.0	100.0	32
Grand Total	77.6	22.0	.4	100.0	12,982

Tables 25 (a) & 25 (b) Combined - Prevalance Rates (per thousand) of having any Illness(es) during the reference period among persons by availability of certain sanitary facilities- (Both Sexes - Rounds 1 and 2)

Facilities	First Round		Second Round	
	RATES	Number of persons in the sample	RATES	Number of persons in the sample
Protected Water				
Use	290.1	4,392	269.5	3,597
Not use	299.6	55,327	294.6	55,018
Total	299.0	59,719	293.0	58,615
Latrines				
Available	267.2	5,870	237.5	5,225
Not available	302.1	53,849	297.5	53,390
Total	299.0	59,719	293.0	58,615
Refuse Disposal				
Available	263.0	1,804	219.7	1,830
Not available	300.0	57,915	294.5	56,785
Total	299.0	59,719	293.0	58,615

Table 26 (a) - Percentage of persons, who reported having latrine and no latrine during the 14 days by reported health condition, sex and place of defecation - (Round 1)

Place of Defecation	Reported Ill			Reported not Ill			Total number of persons in sample		
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
Having Latrine									
Far away	29.6	32.7	31.0	70.4	67.3	69.0	183	144	327
Back yard	28.5	29.0	28.7	71.5	71.0	71.3	365	343	708
Latrine	24.0	29.3	26.6	76.0	70.7	73.4	2,317	2,348	4,665
Other	23.5	13.1	17.3	76.5	86.9	82.7	60	75	135
Not Stated	9.5	8.7	8.9	90.5	91.3	91.1	11	24	35
Total	24.8	28.8	26.7	75.2	71.2	73.3	2,936	2,934	5,870
Not Having Latrine									
Far away	28.9	31.0	29.9	71.1	69.0	70.1	16,420	15,002	31,422
Back yard	27.7	33.4	30.8	72.3	66.6	69.2	8,668	10,811	19,479
Latrine	21.7	26.0	24.1	78.3	74.0	75.9	118	112	230
Other	34.0	31.8	33.3	66.0	68.2	66.7	1,126	599	1,725
Not Stated	17.8	23.0	20.4	82.2	77.0	79.6	314	307	621
Total	28.5	32.0	30.2	71.5	68.0	69.8	26,646	26,831	53,477

Table 26 (a) (Contd.)

Place of Defecation	Reported Ill			Reported not Ill			Total number of persons in sample		
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
Not Stated									
Far away	28.1	35.4	31.9	71.9	64.6	68.1	107	108	215
Back yard	24.1	30.0	27.0	75.9	70.0	73.0	54	53	107
Latrine	68.2	49.8	58.4	31.8	50.2	41.6	12	13	25
Other	68.9	.0	42.7	31.1	100.0	57.3	5	4	9
Not Stated	.0	.0	.0	100.0	100.0	100.0	9	7	16
Total	28.0	32.7	30.3	72.0	67.3	69.7	187	185	372
Total									
Far away	28.9	31.0	29.9	71.1	69.0	70.1	16,710	15,254	31,964
Back yard	27.7	33.3	30.7	72.3	66.7	69.3	9,087	11,207	20,294
Latrine	24.1	29.2	26.6	75.9	70.8	73.4	2,447	2,473	4,920
Other	33.8	29.9	32.4	66.2	70.1	67.6	1,191	678	1,869
Not Stated	17.1	21.5	19.4	82.9	78.5	80.6	334	338	672
Total	28.1	31.7	29.9	71.9	68.3	70.1	29,769	29,950	59,719

Table 26 (b) - Percentage of persons, who reported having Latrine and no Latrine during the 14 days by reported health condition, sex and place of defecation (Round 2)

Place of Defecation	Reported Ill			Reported not Ill			Total Number of Persons in Sample		
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
Having Latrine									
Far away	28.3	34.1	31.0	71.7	65.9	69.0	185	159	344
Back yard	26.9	24.2	25.5	73.1	75.8	74.5	303	320	623
Latrine	21.2	24.6	22.9	78.8	75.4	77.1	2,089	2,071	4,160
Other	36.5	35.2	36.0	63.5	64.8	64.0	41	37	78
Not Stated	.0	.0	.0	100.0	100.0	100.0	10	10	20
Total	22.4	25.2	23.8	77.6	74.8	76.2	2,628	2,597	5,225
Not having Latrine									
Far away	27.6	30.1	28.8	72.4	69.9	71.2	16,243	14,549	30,792
Back yard	27.6	33.5	30.8	72.4	66.5	69.2	9,126	11,310	20,436
Latrine	22.1	27.8	25.0	77.9	72.2	75.0	169	161	330
Other	38.9	34.2	36.8	61.1	65.8	63.2	696	496	1,192
Not Stated	23.8	16.7	20.5	76.2	83.3	79.5	212	197	409
Total	27.8	31.6	29.7	72.2	68.4	70.3	26,446	26,713	53,159

Table 26 (b) (Contd.)

Place of Defecation	Reported Ill			Reported not Ill			Total Number of Persons in Sample		
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
Not Stated									
Far away	34.7	36.0	35.3	65.3	64.0	64.7	63	56	119
Back yard	25.7	38.5	32.7	74.3	61.5	67.3	38	52	90
Latrine	.0	.0	.0	100.0	100.0	100.0	3	1	4
Other	.0	8.9	5.5	100.0	91.1	94.5	3	5	8
Not Stated	37.5	27.7	31.2	62.5	72.3	68.8	3	7	10
Total	30.1	35.2	32.6	69.9	64.8	67.4	110	121	231
Total									
Far away	27.7	30.1	28.8	72.3	69.9	71.2	16,491	14,764	31,255
Back yard	27.6	33.4	30.7	72.4	66.6	69.3	9,467	11,682	21,149
Latrine	21.3	24.9	23.1	78.7	75.1	76.9	2,261	2,233	4,494
Other	38.5	33.9	36.5	61.5	66.1	63.5	740	538	1,278
Not Stated	23.4	16.3	20.1	76.6	83.7	79.9	225	214	439
Total	27.4	31.2	29.3	77.6	68.8	70.7	29,184	29,431	58,615

Tables 27 (a) & 27 (b) Combined - Health status of persons (prevalence rates per 1000) in whose housing units domestic Animals spend and do not spend nights, in the same room with household members-(Both Sexes - Rounds 1 & 2)

Status of Domestic Animals spending hights with members	First Round		Second Round	
	Rates Population	Number of persons in the sample	Rates Population	Number of persons in the sample
Animals spend nights with members	296.6	44,811	283.9	46,096
Animals do not spend nights with members	308.6	14,354	332.5	12,291
Not stated	292.9	554	324.2	228
Total	299.0	59,719	293.0	58,615

8.4 - Injuries

In the Health Survey Injury was defined as physical or organic harm or damage sustained by any person as a result of an accident or physical violence. Data on injuries have been compiled in tables 28 (a) - 30 (a) and 32 (a) for the first round and in tables 28 (b) - 30 (b), 31 and 32 (b) for the second round.

According to tables 28 (a) and 28 (b) the prevalence rates (per ten thousand) of injuries among the total rural population (both sexes) are 235.2 for the first round and 227.0 for the second. By sex it is 296.8 and 172.6 for males and females, respectively in the first round and 284.4 and 169.0 for males and females, respectively in the second. Males have substantially higher rates than females in both rounds. Results on prevalence of injuries for Nigeria and Botswana are included here for comparison.

Country	Prevalence Rates per Ten Thousand			Length of reference period	Date of Survey
	Male	Female	Both Sexes		
Botswana[4]	125.4	77.7	99.1	14 days	1983-1984
Nigeria[7] (Rural only)	250.0	170.0	210.0	14 days	
Ethiopia					
Round 1	296.8	172.6	235.2	14 days	1982
Round 2	284.4	169.0	227.0	14 days	1983

The Survey results by sex, for the first round are close to those in the second round, those for the first round being

slightly higher. The values of these results for the first round are higher than for the second because people in the rural areas are exposed to more hardships of physical work and severe weather during the rainy season, i.e. when the first round, was carried out than during the dry season, i.e. when the second round was carried out.

Examining how prevalence rates of injuries relate to age in the same table, it can be easily seen that, in both rounds for each sex there is a general trend for prevalence rates of injuries to increase with increasing ages, the only exceptions to this being that for females under 1 year old, which has a higher rate than the next age group, and that for males aged 65 years and over, which has a lower rate than the preceding age group in the first round and only that for males 65 years and above, which again has a smaller rate than the preceding age group in the second round.

Tables 29 (a) and 29 (b) show distribution of injuries by cause of injury for each sex-age group. In total 50.8%, 41.6% and 47.4% of the injured males, females and both sexes respectively in the first round and 43.2%, 46.2% and 44.3% of the injured males, females and both sexes, respectively in the second round have been reported to be injured by "other causes" (i.e. unidentified causes). It is not clear why so big a part of the injured population reported unidentified causes of injury.

Next to"other causes", "Accidental Falls" is by far the most prevalent cause of injury among each of the sexes in both rounds. Among the males "Injury by domestic Animals" is the next most prevalent cause of injury in both rounds. Among the females, however, "Accidental Burns" is next in prevalence and it is closely followed by the cause "Injuries by Domestic Animals" in both rounds. The least prevalent cause of injury among both males and females in the first round is "Bites and Stings". But in the second round "Accidents by Fire - arms"

is the least frequent cause of injury for each sex. Further information as regards variation by age in these values can be obtained from more examination of the tables.

Tables 30 (a) and 30 (b) show prevalence rates (Per ten thousand) of being injured for each region by cause of injury for rounds 1 and 2. Wellega has the highest overall prevalence rates of being injured in both rounds with 411.1 per ten thousand in the first and 384.2 per ten thousand in the second round. It is followed by Gamo Gofa in the first round and by Gonder in the second round with prevalence rates of 385.9 and 309.5 per ten thousand, respectively. Bale region has been reported to have the lowest prevalence rates of injury in both rounds with 75.1 per ten thousand in the first and 85.9 per ten thousand in the second.

Coming to cause of injury, like the result for the 12 regions taken together, "Other causes (i.e. unidentified causes) of injury" has the highest prevalence rates in almost all regions in each round. In the first round Bale, Illubabor and Wollo are the exceptions in which injuries due to "Accidental Falls" have the highest prevalences. In the second round Wollo is the only exception in which injuries due to "Accidental Falls" have the highest prevalence rate. Injuries caused by "Accidental Falls" have the next highest prevalence rates in the rest of the regions in both rounds. Further examination of these tables shows distribution of prevalence rates of injuries by each of the identified causes by region in each round.

The inter-relations of being injured with religion for the second round only is given in table 31. Like in morbidity prevalence rate of injuries is highest among orthodox christians and lowest among moslems. But unlike in the case of morbidity there is hardly any difference between the values of prevalence rates of being injured for orthodox christians and other christians.

Tables 32 (a) and 32 (b) show distribution of injured persons by cause and number of days of restricted activity.

Again in both rounds injuries due to "Other causes" (i.e. unidentified causes) have the highest percentage in each category of days of restricted activity. And these percentages tend to be somewhat greater with increasing number of days of restricted activity showing that most injuries caused by "other causes" tend to be rather severe. In both rounds injuries caused by "Accidental falls" have the second highest percentages for each group of number of days of restricted activity. It seems that a larger proportion of the populatic is affected with increasing number of days of restriction in the first round. But no such clear trend is apparent in the second round.

Table 28 (a) - Prevalence Rates (per ten thousand) of being injured by Age and Sex - (Round 1)

Status of Being Injured & Sex	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Having reported Injury							
Male	25.1	118.9	140.1	460.4	489.7	444.2	296.8
Female	130.9	73.1	114.0	215.3	266.5	392.3	172.6
Both Sexes	78.2	96.3	127.5	333.0	383.3	421.7	235.2
Having reported no Injury							
Male	9,779.3	9,661.1	9,680.9	9,377.4	9,366.8	9,342.9	9,525.7
Female	9,707.5	9,731.6	9,671.6	9,603.9	9,643.1	9,529.9	9,648.2
Both Sexes	9,743.3	9,695.9	9,676.4	9,495.1	9,498.4	9,424.0	9,586.5
Not Stated							
Male	195.6	220.0	179.0	162.2	143.5	212.9	177.5
Female	161.7	195.3	214.4	180.8	90.5	77.8	179.2
Both Sexes	178.6	207.8	196.1	171.9	118.2	154.3	178.4

Table 28 (a) (Contd.)

Status of Being Injured & Sex	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Total							
Male	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0
Female	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0
Both Sexes	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0
Number of Persons in the sample							
Male	1,125	4,531	9,162	10,288	3,253	1,410	29,769
Female	1,082	4,473	8,633	11,350	3,222	1,190	29,950
Both Sexes	2,207	9,004	17,795	21,638	6,475	2,600	59,719

Table 28 (b) - Prevalence Rates (per ten thousand) of being Injured by Age and Sex - (Round 2)

Status of Being Injured & Sex	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Having reported Injury							
Male	97.9	156.3	218.3	353.6	442.4	385.4	284.4
Female	52.4	107.2	149.7	193.2	238.4	255.6	169.0
Both Sexes	75.1	131.8	185.1	270.1	346.2	328.6	227.0
Having reported no Injury							
Male	9,900.4	9,842.8	9,775.4	9,631.9	9,532.5	9,537.9	9,704.5
Female	9,941.1	9,888.2	9,849.3	9,801.7	9,751.6	9,679.3	9,825.6
Both Sexes	9,920.8	9,865.4	9,811.2	9,720.3	9,651.1	9,599.8	9,764.7
Not Stated							
Male	1.7	1.0	6.3	14.5	5.1	76.7	11.2
Female	6.5	4.6	.9	5.1	.0	65.1	5.4
Both Sexes	4.1	2.8	3.7	9.6	2.7	71.6	8.3

Table 28 (b) (Contd.)

Status of Being Injured & Sex	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Total							
Male	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0
Female	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0
Both Sexes	10,000.0	10,000.0	10,000.0	10,000.0	10,000.0	10.000.0	10,000.0
Number of Persons in the sample							
Male	1,151	4,272	9,065	10,080	3,236	1,380	29,184
Female	1,124	4,247	8,610	11,125	3,153	1,172	29,431
Both Sexes	2,275	8,519	17,675	21,205	6,389	2,552	58,615

Table 29 (a) Percentage distribution of being Injured in each Age and Sex group by cause of Injury - (Round 1)

Sex and Cause of Injury	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Male							
Accidental falls	86.9	36.0	34.1	22.6	26.7	22.6	26.0
Injuries by Domestic Animals	.0	6.3	8.1	11.4	8.3	9.8	9.9
Accidental burns	13.1	33.4	4.7	.2	.5	2.1	3.1
Accidents by firearms	.0	.0	1.5	4.6	3.8	.0	3.4
Injuries purposely inflicted	.0	.0	5.1	4.6	5.1	13.8	5.1
Bites and stings	.0	1.3	2.2	1.6	.4	4.6	1.6
Other causes	.0	23.0	44.3	54.9	55.2	47.0	50.8
All causes	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Female							
Accidental Falls	26.4	28.3	31.2	33.3	43.8	51.1	35.4
Injuries by Domestic Animals	3.5	1.8	1.3	5.9	11.8	6.1	5.6
Accidental burns	36.6	25.5	9.9	2.0	6.7	.0	6.6
Accidents by firearms	.0	.0	3.0	5.1	4.4	.4	3.8
Injuries purposely inflicted	.0	2.5	10.8	3.5	.8	.0	4.0
Bites and Stings	10.5	7.9	4.6	1.4	.8	6.2	2.9
Other causes	23.0	34.0	39.2	48.9	31.7	36.2	41.6
All causes	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 29 (a) (Contd.)

Sex and Cause of Injury	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Both Sexes							
Accidental falls	36.1	33.1	32.8	26.2	32.4	34.1	29.5
Injuries by Domestic Animals	3.0	4.6	5.2	9.6	9.5	8.3	8.4
Accidental burns	32.8	30.4	6.9	.8	2.5	1.3	4.4
Accidents by firearms	.0	.0	2.2	4.8	4.0	.1	3.6
Injuries purposely inflicted	.0	.9	7.6	4.2	3.7	8.2	4.7
Bites and sting	8.8	3.8	3.3	1.5	.5	5.3	2.1
Other causes	19.3	27.1	42.1	52.9	47.4	42.6	47.4
All causes	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Injured Persons in the sample							
Male	5	58	150	474	159	57	903
Female	11	39	99	255	93	37	534
Both Sexes	16	97	249	729	252	94	1,437

Table 29 (b) - Percentage distribution of being Injured in each Age and Sex group by cause of Injury (Round 2)

Sex and Cause of Injury	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Male							
Accidental falls	58.8	31.7	30.2	22.3	25.8	24.5	26.2
Injuries by domestic Animals	.0	10.6	11.1	16.4	13.7	16.2	14.0
Accidental burns	37.4	35.7	4.3	2.1	.0	.0	5.3
Accidents by firearms	.0	3.6	.0	3.0	6.0	8.0	3.1
Injuries purposely inflicted	.0	.0	7.0	4.6	2.2	1.7	4.2
Bites and stings	.0	.7	7.1	3.4	.9	12.8	4.1
Other cause	3.7	17.7	40.2	48.2	51.4	36.7	43.2
All causes	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Female							
Accidental falls	29.8	24.5	22.8	22.8	22.8	47.0	24.3
Injuries by domestic Animals	.0	1.3	11.1	5.5	16.7	15.3	8.6
Accidental burns	18.3	45.3	9.4	5.0	2.9	.0	9.4
Accidents by firearms	.0	1.8	.9	4.0	2.9	2.1	2.7
Injuries purposely inflicted	.0	.0	3.4	5.9	3.1	.0	3.9
Bites and stings	.0	2.0	6.8	5.1	3.2	4.1	4.9
Other causes	52.0	25.1	45.6	51.8	48.5	31.4	46.2
All causes	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 29 (b) (Contd.)

Sex and Cause of Injury	Age in Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Both Sexes							
Accidental falls	48.7	28.7	27.3	22.5	24.8	32.2	25.5
Injuries by domestic Animals	.0	6.8	11.1	12.3	14.7	15.9	12.0
Accidental Burns	30.7	39.6	6.3	3.2	.9	.0	6.8
Accidents by firearms	.0	2.9	.4	3.4	5.0	6.0	2.9
Injuries purposely inflicted	.8	.0	5.6	5.1	2.5	1.2	4.1
Bites and Stings	.0	1.2	7.0	4.0	1.6	9.8	4.4
Other causes	20.6	20.7	42.3	49.5	50.5	34.9	44.3
All causes	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Injured persons in the sample							
Male	9	68	205	374	143	52	851
Female	7	49	122	223	82	38	521
Both Sexes	16	117	327	597	225	90	1,372

Table 30 (a) - Pervalence Rates (per ten thousand) of being Injured in each Region by cause of Injury - (Round 1)

Regions	Accide-ntal falls	Injuries by domestic Animals	Accide-ntal burns	Accidents by firearms	Injuries purposely Inflicted by others	Bites and stings	Other causes	All type of conditions	Rank	No. of persons in the sample
Arssi	62.6	45.6	5.2	4.6	5.8	8.5	140.6	272.9	4	4,545
Bale	22.1	20.2	6.7	2.2	2.5	.0	21.2	75.1	12	4,303
Gamo Gofa	99.6	14.1	23.1	1.7	3.2	5.9	238.3	385.9	2	3,894
Gojjam	82.9	8.1	5.9	.0	4.3	.0	94.0	195.3	9	4,123
Gonder	31.2	20.4	13.9	.0	19.1	.5	117.5	202.6	8	5,063
Hararge	89.1	6.0	2.0	5.4	20.0	3.6	108.8	234.9	7	4,218
Illubabor	110.0	25.7	2.0	35.9	2.3	1.2	99.0	276.1	3	3,884
Kefa	69.3	19.6	10.3	7.1	9.5	5.3	141.5	262.5	5	4,104
Shoa	55.5	19.1	7.1	7.4	11.3	5.4	82.0	187.9	10	11,106
Sidamo	53.6	21.0	20.2	18.7	7.0	11.5	126.1	258.1	6	3,964
Wellega	110.9	43.8	24.2	26.5	10.6	4.7	190.4	411.1	1	6,439
Wollo	78.7	10.3	5.1	2.8	17.5	6.4	62.0	182.7	11	4,076
Total	69.3	19.7	10.3	8.4	11.0	5.0	111.6	235.2		59,719

Table 30 (b) - Prevalence Rates (per ten thousand) of being injured in each Region by cause of Injury. (Round 2)

Regions	Accide-ntal falls	Injuries by domestic Animals	Accide-ntal burns	Accidents by firearms	Injuries purposely inflicted by others	Bites and stings	Other causes	All type of conditions	Rank	No. of persons in the sample
Arssi	42.6	36.3	13.5	2.1	14.7	1.9	153.1	264.2	6	4,553
Bale	19.2	17.6	10.1	.0	3.0	.0	36.1	85.9	12	4,149
Gamo Gofa	70.0	40.6	29.4	5.2	12.4	13.5	110.6	281.7	3	3,638
Gojjam	80.7	31.2	13.7	2.8	13.7	2.8	126.4	271.4	4	4,256
Gonder	80.6	28.8	10.3	.8	15.3	21.2	152.4	309.5	2	4,713
Hararge	38.7	21.9	10.7	6.3	17.1	2.2	50.5	147.4	10	4,158
Illubabor	49.8	5.5	7.9	22.4	4.2	7.0	97.9	194.7	7	3,727
Kefa	34.6	24.3	13.7	5.4	.0	4.4	94.0	176.5	9	4,086
Shoa	42.0	31.6	12.4	6.1	9.1	20.9	67.6	189.7	8	11,047
Sidamo	75.1	27.2	21.7	6.5	6.8	.2	130.6	268.1	5	3,889
Wellega	101.0	29.5	25.4	25.1	6.9	5.9	190.3	384.2	1	6,411
Wollo	44.4	13.5	17.8	3.5	3.8	10.3	35.5	128.9	11	3,988
Total	57.8	27.2	15.5	6.7	9.2	10.0	100.5	227.0		58,615

Table 31 - Percentage of persons who reported having some Injury and no Injury by sex and Religion - (Round 2)

Status of Being Injured and Sex	Orthodox	Other Christian	Moslem	Other including Not Stated	Total
Injured					
Male	3.3	2.9	1.9	3.1	2.8
Female	2.0	2.1	1.0	1.5	1.7
Both Sexes	2.7	2.5	1.5	2.3	2.3
Not Injured					
Male	96.7	97.1	98.0	96.1	97.0
Female	98.0	97.9	98.9	98.2	98.3
Both Sexes	97.3	97.5	98.5	97.1	97.6
Not Stated					
Male	.1	.0	.1	.9	.1
Female	.0	.0	.0	.3	.1
Both Sexes	.0	.0	.1	.6	.1
Total					
Male	50.7	49.3	50.0	49.1	50.3
Female	49.3	50.7	50.0	50.9	49.7
Both Sexes	100.0	100.0	100.0	100.0	100.0
Number of Persons in the sample					
Male	16,271	1,938	8,492	2,483	29,184
Female	16,202	2,029	8,611	2,589	29,431
Both Sexes	32,473	3,967	17,103	5,072	58,615

Table 32 (a) - Percentage Distribution of Injured Persons by cause of Injury, sex and number of days of restricted activity due to Injury - (Round 1)

Days of Restricted Activity and Sex	Cause of Injury								
	Accidental falls	Injuries by Domestic Animals	Accidental burns	Accidents by Firearms	Purposely Injuries Inflicted by others	Bites and stings	Other causes	All causes	Injured persons in the sample
None									
Male	23.7	10.9	3.2	1.4	3.6	1.8	55.5	100.0	317
Female	30.0	7.1	3.2	4.9	1.5	1.0	52.3	100.0	165
Both Sexes	25.8	9.6	3.2	2.5	2.9	1.5	54.5	100.0	482
1 - 3									
Male	29.4	10.2	2.5	5.1	6.5	1.8	44.5	100.0	257
Female	42.3	5.0	6.9	4.7	8.5	1.4	31.1	100.0	148
Both Sexes	34.0	8.4	4.1	4.9	7.2	1.7	39.7	100.0	405
4 - 6									
Male	30.8	12.3	6.4	4.5	1.3	.0	44.6	100.0	100
Female	36.1	7.4	11.0	1.0	4.8	2.8	36.9	100.0	70
Both Sexes	33.0	10.3	8.5	3.1	2.7	1.1	41.5	100.0	170

Table 32 (a) (Contd.)

Days of Restricted Activity and Sex	Cause of Injury								
	Accidental falls	Injuries by Domestic Animals	Accidental burns	Accidents by Firearms	Injuries Purposely Inflicted by others	Bites and stings	Other causes	All causes	Injured persons in the sample
7 - 14									
Male	27.7	9.1	2.7	3.1	8.8	2.0	46.6	100.0	190
Female	42.0	5.0	10.1	4.0	2.4	4.0	32.3	100.0	115
Both Sexes	33.2	7.6	5.5	3.5	6.3	2.8	41.1	100.0	305
Not Stated									
Male	5.7	.1	.4	6.1	.0	1.7	86.0	100.0	39
Female	9.6	1.4	.0	.0	.0	13.0	75.9	100.0	36
Both Sexes	7.5	.7	.2	3.3	.0	6.8	81.4	100.0	75
Total									
Male	26.0	9.9	3.1	3.4	5.1	1.6	50.8	100.0	903
Female	35.4	5.6	6.6	3.8	4.0	2.9	41.6	100.0	534
Both Sexes	29.5	8.4	4.4	3.6	4.7	2.1	47.4	100.0	1,437

Table 32 (b) - Percentage Distribution of Injured Persons by cause of Injury, sex and number of days of restricted activity due to Injury - (Round 2)

Days of Restricted Activity and Sex	Cause of Injury								
	Accidental falls	Injuries by Domestic Animals	Accidental burns	Accidents by Firearms	Injuries Purposely Inflicted by others	Bites and stings	Other causes	All causes	Injured persons in the sample
None									
Male	24.2	13.1	5.5	2.1	1.6	.8	52.8	100.0	361
Female	22.9	5.6	8.4	1.1	2.4	3.0	56.6	100.0	209
Both Sexes	23.7	10.4	6.5	1.7	1.9	1.6	54.1	100.0	570
1 - 3									
Male	27.4	14.5	1.8	3.6	4.2	11.6	36.9	100.0	254
Female	21.2	16.6	3.8	5.4	5.4	8.5	39.0	100.0	136
Both Sexes	25.3	15.2	2.5	4.2	4.6	10.6	37.6	100.0	390
4 - 6									
Male	27.8	13.3	16.5	1.7	1.0	.0	39.7	100.0	90
Female	22.8	6.3	18.4	3.6	.2	9.0	39.7	110.0	58
Both Sexes	25.8	10.5	17.3	2.5	.7	3.7	39.7	100.0	148

Table 32 (b) (Contd.)

Days of Restricted Activity and Sex	Cause of Injury								
	Accidental falls	Injuries by Domestic Animals	Accidental burns	Accidents by Firearms	Purposely Injuries Inflicted by others	Bites and stings	Other causes	All causes	Injured persons in the sample
7 - 14									
Male	28.7	16.4	4.5	5.7	11.3	1.1	32.4	100.0	139
Female	34.0	6.6	14.7	1.9	7.8	1.8	33.1	100.0	103
Both Sexes	30.9	12.4	8.7	4.2	9.8	1.4	32.7	100.0	242
Not Stated									
Male	8.7	.0	.0	.0	20.7	.0	70.6	100.0	7
Female	14.0	.0	3.4	.0	.0	.0	82.6	100.0	15
Both Sexes	12.6	.0	2.4	.0	5.7	.0	79.3	100.0	22
Total									
Male	26.2	14.0	5.3	3.1	4.2	4.1	43.2	100.0	851
Female	24.3	8.6	9.4	2.7	3.9	4.9	46.2	100.0	521
Both Sexes	25.5	12.0	6.8	2.9	4.1	4.4	44.3	100.0	1,372

8.5 - Treatment

Results on treatment are shown in tables 33 (a)- 38(a) and 42 (a)- 43 (a) for the first round and tables 33 (b) - 38 (b), 39,40,41,42 (b) and 43 (b) for the second round. For the purposes of the Health Survey, Health Facility has been defined as any institution or organization or person that/who gives some treatment to ill or injured persons. Accordingly six such facilities and a residual group have been identified to exist in rural Ethiopia. These are Health Institution (i.e. Hospital, Health Center or Health Station), Community Health Agent (within the context of Primary Health Care), Pharmacy, Traditional Healer, Lay Treatment, Self Treatment and the residual group "Other Facilities". The first two among these may be referred to as "Modern Health Facilities or Services."

According to tables 33 (a) and 33 (b) 26.3% and 27.8% of the total ill or injured persons have reported to be treated in any one of the different facilities in the first and second rounds, respectively, leaving 71.7% and 70.7%, in the first and second rounds, respectively, seeking no treatment what-so-ever and the balance, in each round, not stating whether they had got treatment or not. In each round about a third of all treated persons were treated in health institutions (i.e. hospital, health center or health station). "Traditional healers" are the second most frequented health facilities among the ill or injured persons, a little less than a quarter of all treated persons reporting that they were treated by traditional healers in each round. The least frequented treatment facility in each round appears to be the "Community Health Agents." But this is probably because by the time of the Health Survey only a limited number of farmers' associations had the services of community health agents. In general in both rounds most ill or injured persons

who were treated in any health facility visited it only once. The proportion who made more than one visit to each health facility is usually only a little less than one half of those who got treatment in that facility.

In each of the rounds treatment in health institutions has been frequented by infants under 1 year old more than persons in any other age group. In the first round nearly half of the infants who received treatment in all health facilities were treated in health institutions while the proportion using health institutions for those in each of the remaining age groups is about $1/3$ or even less in the more advanced ages. The proportions of persons treated in health institutions out of the total who sought treatment in all health facilities in the second round are nearly $2/5$ for infants under 1 year, about $1/3$ for young children aged 1-4 years and persons in the age group of 15-44 years, nearly a third for persons aged 45-64 years and about a quarter for those in the age group of 5 - 14 years and persons aged 65 & above. In both rounds relatively more persons in the infanthood and early childhood ages have received treatment anywhere than the persons in the older age groups. The percentage of those who received treatment for each age group generally declines with increasing age in both rounds except at the age group of 15 - 44 years where the percentage of those treated is higher than in the preceding age group in both rounds.

According to tables 34 (a) and 34 (b) seeking treatment in any of the health facilities seems to be frequented more by men than by women in both rounds of the Health Survey: 28.5% of all males and 24.2% of all females in the first round and 29.5% of all males and 26.2% of all females in the second round having received treatment in any of the health facilities. Seeking treatment from health institution is slightly higher among men than among females; whereas

there is hardly any difference between the sexes in the degree of seeking treatment from "traditional healers ." On the other hand "self treatment" seems to be significantly more common among males than among females in both rounds. More than half of persons who received treatment in each of the health facilities made only one visit to each(refer to tables 34 (a) and 34 (b) for further details).

At this point it is necessary to note why the sum of the percentages of persons treated in the different health facilities in each column is slightly higher than the percentage of all treated persons at the bottom of the corresponding column. This is because some persons have been treated in more than one type of health facility, thus being counted for more than one health facility while each treated person has been counted only once for the calculation of the aggregate percentage at the bottom of each column.

Percentage distributions of treated persons by type of treatment (health) facility for members of households of various sizes are presented in tables 35 (a) and 35 (b) for the first and second rounds, respectively. There is a general trend in which the proportion of all persons receiving treatment from any health facilities gradually growing with increasing size of households for both rounds. This trend is generally true for seeking treatment in health institutions, pharmacies and lay treatment in both rounds. It is also true for receiving treatment from community health agents in the first round.

Tables 36 (a) and 36 (b) show the proportion (in percentages) of persons, treated in the various health facilities, by region as well as the rank of regions with respect to seeking treatment for the first and second rounds, respectively. Variations in the magnitude of the proportion of persons seeking treatment in any of the facilities by region are great in both rounds. These range from 36.7% for Gamo Gofa to

17.2% for Gojjam in the first round and from 42.3% for Hararge to 13.0% for Wollo in the second round. In both rounds the health facility "health institution" is the most frequented in 9 regions, Gojjam, Hararge and Sidamo being the exceptions in the first round and Hararge, Kefa and Sidamo in the second round where the most frequented facilities are "traditional healer", "pharmacy" and "lay treatment".

It is clear from tables 37(a) and 37(b) that more persons of each sex tend to seek treatment from health institutions and community health agents for more serious diseases (for illnesses or injuries of 7 - 14 and 4 - 6 days durations) in both rounds. This is more so in the first round than in the second. This is also to a very large extent confirmed by tables 38 (a) and 38 (b) which show the percentage distributions of persons reporting illness or injury by source of treatment and duration of restricted activity due to illness or injury for each sex. However, this is not literally true for the first round where ill or injured persons with no restriction of activity seem to have frequented modern health facilities more than those with any number of days of restricted activity for each sex:- 21.7% of males and 22.6% of females with no restriction of activity compared to 17.3% of males and 15.7% of females with restriction of activity of 7 - 14 days have used modern health facilities in the first round.

Tables 39 , 40 and 41 show percentage distributions of ill or injured persons by source of treatment by educational attainment of head of household, marital status of persons and religion of head of household, respectively in the second round only. It can be easily seen, from table 39, that in the second round percentage of persons seeking help from health institution or community health agent generally increased with increasing educational attainment of heads of households upto grades 4 - 6 and then declined. That is strangely enough the proportion of the population who

sought treatment from health institution or community health agent was considerably higher among those whose heads of households completed only grades 4 - 6 than among persons whose heads of households completed grades 7 - 8 and 9 and above. However, this is so probably because the number of persons whose heads of households had completed grades 7 - 8 and grades 9 and above in the rural areas is very small, implying that these percentages probably have little meaning. That seeking treatment from health institution or community health agent increased with higher educational attainment of heads of households (at least upto grades 4 - 6) is more marked in the case of females than males.

Coming to inter-relations of place of treatment with marital status, table 40 shows that seeking treatment from health institution or community health agent was least common among the divorced and most common among the married persons of each of the sexes in the second round.

As regards inter-relations of religion with place of treatment, it can be seen, from table 41 that, in the second round , seeking treatment from health institution or community health agent was highest among persons belonging to the residual religious group "other" for males and among those belonging to "other christians" (i.e. other than orthodox christians) for females. Females belonging to the residual religious group "other" closely follow the female other christians in seeking treatment from health institution or community health agent.

According to tables 42 (a) and 42 (b), which show the percentage distributions of all ill persons by type of treatment sought (including "no treatment sought") by disease groups and by severity measured by duration of restricted activity due to illness. In almost all disease groups and in both rounds more ill persons have sought

treatment from health institution or community health agent (CHA) than any other type or group of health facility taken in single. This is true for almost all designated degrees of severity, the exceptions being those suffering from venereal diseases and requiring no restriction of activity as well as those restricted for 7 - 14 days and those having maternal health problems and experiencing restriction of activity for 1 - 6 days and those suffering from the residual group of diseases and requiring no restriction of activity in the first round. And in the second round those afflicted by head and neck problems and requiring no restriction of activity as well as those restricted for 1 - 6 days and those suffering from skin problems and experiencing restriction of activity for 1 - 6 days and those suffering from the residual group of diseases and again requiring no restriction of activity as well as those restricted for 1 - 6 days are the exceptions. Among each of these exceptions "traditional healer" is the most frequented facility. These tables also clearly show that, for persons afflicted by every designated disease group in each round, seeking treatment from health institution or CHA was most common when the diseases were most severe (i.e. measured by number of days of restriction) thus confirming what has been said above in connection with tables 37 (a), 37 (b), 38 (a) and 38 (b).

Tables 43 (a) and 43 (b) show for all injured persons what tables 42 (a) and 42 (b) show for ill persons. For neither rounds could it be said that more persons sought treatment from health institution or community health agent than from any other type of health facility. In fact "traditional healer"; "self treatment" and "lay treatment" seem to be the more important sources of treatment among injured persons. That the degree of seeking treatment from health institution or CHA increases with increasing severity of injury is also true for injured persons by almost all causes of injury as it was true for ill persons. Examine tables 43 (a) and 43(b) for further details.

Table 33 (a) - Percentage of persons reported treated in different treatment facilities by age and number of times treated (out of all reported Ill or Injured in the age groups) - (Round 1)

Types of Treatment Facilities and Number of Times Treated	Age Groups In Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Health Institution							
1 Time	8.5	6.5	4.0	5.3	4.5	2.7	5.0
2 Times	4.5	2.3	1.6	1.6	1.7	.7	1.8
3 and above	2.1	3.1	1.9	2.0	1.5	1.7	2.0
Total	15.1	12.0	7.5	8.9	7.7	5.2	8.8
Community Health agent							
1 Time	.1	.3	.6	.7	.4	.3	.5
2 Times	.4	.4	.4	.2	.2	.2	.3
3 and above	.2	.2	.1	.1	.1	.0	.1
Total	.7	.9	1.1	1.1	.8	.5	1.0
Pharmacy							
1 Time	3.6	3.7	2.2	2.8	1.9	1.9	2.6
2 Times	1.4	.5	.5	.7	.4	.5	.6
3 and above	.5	.8	.5	.5	.7	.5	.5
Total	5.5	5.0	3.2	4.0	3.0	2.9	3.8
Traditional Healer							
1 Time	3.3	3.3	2.9	3.0	2.7	2.7	3.0
2 Times	1.2	1.5	.7	1.2	1.1	.7	1.1
3 and above	2.4	1.4	1.5	1.5	1.5	1.9	1.5
Total	7.0	6.2	5.1	5.8	5.3	5.4	5.6
Lay Treatment							
1 Time	2.9	3.0	3.7	2.0	1.1	1.5	2.3
2 Times	1.2	1.4	1.1	.8	.3	.3	.8
3 and above	.7	.6	.8	.6	.3	.5	.6
Total	4.8	5.0	5.6	3.4	1.7	2.3	3.7
Self Treatment							
1 Time	.4	.3	.8	2.6	2.4	2.3	1.9
2 Times	.5	.3	.5	.9	1.1	1.0	.8
3 and above	.2	.3	.6	.9	.5	.8	.7
Total	1.1	.9	2.0	4.5	4.1	4.1	3.4

Table 33 (a) (Contd.)

Types of Treatment Facilities and Number of Times Treated	Age Groups In Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Other							
1 Time	.4	.5	.3	.5	.4	.2	.4
2 Times	.2	.2	.3	.2	.4	.1	.2
3 and above	.3	.1	.1	.2	.2	.3	.2
Total	.9	.8	.7	.9	1.0	.5	.9
Facility not stated	.1	.7	.3	.7	.4	.9	.5
All reported treated	34.6	30.1	24.6	27.7	22.6	20.3	26.3
All not treated	61.9	67.0	72.9	70.4	76.2	77.4	71.7
Not Stated	3.5	2.9	2.5	1.9	1.3	2.3	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total of Ill or Injured Persons in the Sample	597	2,277	3,464	7,965	3,282	1,406	18,991

Table 33 (b) - Percentage of persons reported treated in different treatment facilities by age and number of times treated (out of all reported Ill or Injured in the age groups) - (Round 2)

Types of Treatment Facilities and Number of Times Treated	Age Groups In Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Health Institution							
1 Time	9.3	6.9	4.1	4.8	3.9	2.7	4.9
2 Times	4.4	2.4	1.3	2.6	2.1	1.1	2.2
3 and above	2.2	1.5	1.0	1.8	1.5	.9	1.5
Total	15.9	10.8	6.4	9.2	7.6	4.6	8.6
Community Health agent							
1 Time	.1	.7	.5	.3	.3	.5	.4
2 Times	.2	.5	.1	.3	.1	.0	.2
3 and above	.0	.1	.1	.1	.2	.0	.1
Total	.2	1.4	.7	.7	.6	.5	.7
Pharmacy							
1 Time	4.0	3.3	3.2	2.9	1.9	1.5	2.8
2 Times	1.2	.7	.6	.8	.8	.6	.7
3 and above	.9	.6	.3	.4	.5	.0	.4
Total	6.1	4.6	4.2	4.1	3.2	2.0	4.0
Traditional Healer							
1 Time	5.0	3.8	4.2	3.8	2.4	2.8	3.6
2 Times	2.0	1.4	.7	1.3	.8	1.8	1.2
3 and above	1.3	1.6	1.1	1.3	1.2	1.7	1.3
Total	8.3	6.8	6.1	6.4	4.3	6.3	6.1
Lay Treatment							
1 Time	4.4	3.3	3.5	2.3	1.2	1.6	2.5
2 Times	1.6	1.3	1.3	.9	.7	1.0	1.0
3 and above	.6	.9	1.4	.6	.7	.6	.8
Total	6.6	5.5	6.2	3.8	2.6	3.2	4.4
Self Treatment							
1 Time	1.4	.7	1.6	2.2	2.1	1.5	1.8
2 Times	.7	.4	.5	1.1	1.0	.3	.8
3 and above	.6	.2	.3	.9	1.4	.7	.7
Total	2.6	1.3	2.4	4.2	4.4	2.5	3.3

Table 33 (b) (Contd.)

Types of Treatment Facilities and Number of Times Treated	Age Groups In Years						
	Under 1	1-4	5-14	15-44	45-64	65+	Total
Other							
1 Time	.3	.5	.7	.6	.5	.5	.6
2 Times	.0	.6	.4	.5	.3	.4	.4
3 and above	1.2	.7	.4	.4	.4	.4	.5
Total	1.4	1.9	1.4	1.5	1.2	1.3	1.5
Facility not stated	.4	.5	.6	.4	.8	.0	.5
All reported treated	40.9	31.0	26.9	28.8	23.3	19.7	27.8
All not treated	57.1	67.5	71.3	70.0	74.8	78.3	70.7
Not Stated	2.0	1.5	1.8	1.2	2.0	2.0	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total of Ill or Injured Persons in the Sample	761	2,543	3,736	7,124	3,021	1,276	18,461

Table 34 (a) - Percentage of persons reported treated in different treatment facilities by sex and number of times treated (out of all ill or injured in each sex) - (Round 1)

Types of Treatment Facility and Number of Times Treated	Male	Female	Total
Health Institution			
1 Time	5.3	4.7	5.0
2 Times	2.0	1.5	1.8
3 and above	2.5	1.5	2.0
Total	9.9	7.7	8.8
Community Health agent			
1 Time	.5	.6	.5
2 Times	.3	.3	.3
3 and above	.1	.1	.1
Total	.9	1.0	1.0
Pharmacy			
1 Time	2.8	2.4	2.6
2 Times	.7	.5	.6
3 and above	.7	.4	.5
Total	4.3	3.3	3.8
Traditional Healer			
1 Time	3.0	2.9	3.0
2 Times	1.2	1.0	1.1
3 and above	1.4	1.7	1.1
Total	5.6	5.6	5.6
Lay Treatment			
1 Time	2.2	2.3	2.3
2 Times	.7	.9	.8
3 and above	.5	.6	.6
Total	3.5	3.9	3.7
Self Treatment			
1 Time	2.5	1.3	1.9
2 Times	1.0	.6	.8
3 and above	.7	.6	.7
Total	4.3	2.6	3.4

Table 34 (a) (Contd.)

Types of Treatment Facility and Number of Times Treated	Male	Female	Total
Other			
1 Time	.4	.4	.4
2 Times	.3	.2	.2
3 and above	.2	.2	.2
Total	.9	.8	.9
Facility not stated	.5	.6	.5
All reported treated	28.5	24.2	26.3
All not treated	69.6	73.6	71.7
Not stated	2.0	2.2	2.1
Total	100.0	100.0	100.0
Total of ill or injured person in the sample	8,999	9,992	18,991

Table 34 (b) - Percentage of persons reported treated in different treatment facilities by sex and number of times treated (out of all ill or injured in each sex) - (Round 2)

Types of Treatment Facility and Number of Times Treated	Male	Female	Total
Health Institution			
1 Time	5.2	4.5	4.9
2 Times	2.6	1.8	2.2
3 and above	1.3	1.7	1.5
Total	9.1	8.0	8.6
Community Health agent			
1 Time	.4	.4	.4
2 Times	.2	.2	.2
3 and above	.2	.1	.1
Total	.8	.7	.7
Pharmacy			
1 Time	3.1	2.6	2.8
2 Times	1.0	.5	.7
3 and above	.4	.4	.4
Total	4.5	3.5	4.0
Traditional Healer			
1 Time	3.5	3.7	3.6
2 Times	1.4	1.0	1.2
3 and above	1.5	1.2	1.3
Total	6.4	5.9	6.1
Lay Treatment			
1 Time	2.9	2.2	2.5
2 Times	1.0	1.1	1.0
3 and above	1.0	.7	.8
Total	4.9	3.9	4.4
Self Treatment			
1 Time	1.8	1.7	1.8
2 Times	.8	.7	.8
3 and above	.8	.7	.7
Total	3.4	3.2	3.3

Table 34 (b) (Contd.)

Types of Treatment Facility and Number of Times Treated	Male	Female	Total
Other			
1 Time	.5	.6	.6
2 Times	.3	.6	.4
3 and above	.5	.5	.5
Total	1.2	1.7	1.5
Facility not stated	.8	.3	.5
All reported treated	29.5	26.2	27.8
All not treated	69.0	72.2	70.7
Not stated	1.5	1.6	1.6
Total	100.0	100.0	100.0
Total of ill or injured persons in the sample	8,677	9,784	18,461

Table 35 (a) - Percentage of persons treated in different treatement facilities by size of household - (Round 1)

Types of Treatement Facility	Number of Persons in Household										Total
	1	2	3	4	5	6	7	8	9	10 & +	
Health institution	8.2	7.4	8.1	7.8	9.2	8.9	9.9	9.3	8.5	10.7	8.8
Community health agent	.7	.7	.6	.8	.7	1.0	1.2	1.4	3.5	.5	1.0
Pharmacy	2.9	3.1	3.1	3.7	3.4	3.0	4.1	5.3	5.2	7.1	3.8
Traditional healer	6.2	6.2	5.3	4.8	5.5	5.8	5.8	5.6	7.3	6.4	5.6
Lay treatement	1.3	3.2	3.6	2.8	4.3	4.2	3.7	4.0	4.3	3.7	3.7
Self treatement	4.1	3.3	4.1	3.1	3.2	3.6	3.6	3.3	2.8	2.8	3.4
Other	.6	.8	.7	.7	1.1	1.2	.6	.9	.3	.9	.9
Facility not stated	2.5	.0	1.2	.5	.4	1.0	.0	.0	.9	.0	.5
All reported treated	23.1	24.0	25.1	23.2	26.6	26.6	27.7	28.8	31.2	30.9	26.3
All not treated	74.8	73.8	72.9	74.7	71.5	71.2	70.5	68.6	66.7	67.1	71.7
Not stated	2.1	2.1	2.0	2.2	1.8	2.2	1.8	2.7	2.1	2.0	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of households (Total) in the sample	751	1,741	2,328	2,367	2,130	1,567	1,089	659	346	278	13,256
Number of ill or injured persons in the sample	451	1,544	2,511	3,094	3,348	2,742	2,195	1,451	809	846	18,991

Table 35 (b) - Percentage of persons treated in different treatement facilities by size of household - (Round 2)

Types of Treatement Facility	Number of Persons In Household										Total
	1	2	3	4	5	6	7	8	9	10 & +	
Health institution	6.4	7.0	7.8	8.0	8.4	9.3	8.3	7.2	14.5	12.2	8.6
Community health agent	.2	.4	.5	1.2	.6	.5	.8	1.7	.2	.7	.7
Pharmacy	1.4	2.3	4.1	3.1	4.3	4.1	4.1	5.1	3.6	6.6	4.0
Traditional healer	4.8	5.6	6.8	6.6	6.4	6.1	6.2	4.2	6.6	5.2	6.1
Lay treatement	3.1	3.8	2.7	5.7	4.7	4.5	4.2	4.1	3.7	5.7	4.4
Self treatement	5.2	4.7	2.4	3.0	3.5	3.5	2.1	3.4	3.8	5.3	3.3
Other	1.3	1.2	1.1	1.6	1.8	1.3	1.6	1.0	1.9	1.7	1.5
Facility not stated	1.0	.2	.1	.1	1.3	.7	.4	.5	.1	.0	.5
All reported treated	22.2	24.6	24.9	28.3	29.2	28.5	26.5	25.2	33.5	36.8	27.8
All not treated	76.6	74.7	73.1	70.2	69.3	69.9	71.8	73.1	66.1	60.7	70.7
Not stated	1.2	.7	2.0	1.5	1.5	1.6	1.7	1.7	.3	2.6	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of households (Total) in the sample	777	1,614	2,301	2,322	2,072	1,545	1,091	649	332	279	12,982
Number of ill or injured persons in the sample	430	1,411	2,416	2,995	3,192	2,773	2,170	1,457	788	829	18,461

Table 36 (a) - Percentages of treated persons out of total ill or injured persons by facility of treatment and Region - (Round 1)

Region	Health Institution	Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Facility not Stated	Total Treated	Rank
Arssi	8.8	1.7	5.0	3.8	1.6	1.9	0.6	0.1	22.8	9
Bale	18.1	1.2	3.4	5.2	1.4	1.9	0.7	0.1	30.9	5
Gamo Gofa	13.8	0.5	5.3	8.4	6.3	4.3	0.6	0.7	36.7	1
Gojjam	5.2	0.3	1.1	5.4	2.7	2.3	0.6	0.4	17.2	12
Gonder	11.5	0.8	1.1	1.9	1.7	1.1	0.3	1.5	18.4	11
Hararge	8.4	2.3	2.5	13.1	3.9	4.1	1.0	0.4	34.5	3
Illubabor	11.2	0.8	2.5	4.2	3.9	4.6	2.0	0.1	28.4	6
Keffa	9.5	0.3	4.4	2.9	3.3	2.3	1.3	1.3	24.0	8
Shoa	8.7	0.5	1.7	6.9	3.8	4.9	0.8	0.9	26.7	7
Sidamo	6.8	2.5	12.4	6.2	4.5	2.3	1.7	0.0	35.1	2
Wellega	7.8	0.9	5.6	5.8	7.6	5.9	0.5	0.0	31.9	4
Wollo	8.2	0.7	3.0	4.7	1.6	2.4	0.9	0.0	21.3	10
Total	8.8	1.0	3.8	5.6	3.7	3.4	0.9	0.5	26.3	

Table 36 (b) -Percentages of treated persons out of total ill or injured persons by facility of treatment and region - (Round 2)

Region	Health Institution	Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Facility not Stated	Total Treated	Rank
Arssi	8.5	1.6	3.8	4.4	3.4	2.9	1.0	0.4	25.5	8
Bale	15.0	0.6	3.3	5.1	1.5	2.7	0.5	0.0	27.7	6
Gamo Gofa	14.2	0.3	4.3	13.0	6.1	5.3	0.2	0.0	40.5	2
Gojjam	5.5	0.0	1.9	3.6	4.1	2.8	1.5	0.5	19.4	11
Gonder	7.9	0.2	1.7	7.3	2.8	2.6	0.8	0.5	23.3	10
Hararge	12.1	1.2	5.2	14.0	5.1	3.3	1.8	0.7	42.3	1
Illubabor	10.2	0.1	4.4	2.6	2.5	2.6	2.3	0.0	23.4	9
Kefa	8.5	0.7	6.1	4.4	10.9	3.5	1.7	2.6	35.1	4
Shoa	8.2	0.7	1.5	5.7	4.6	4.3	2.3	0.2	26.4	7
Sidamo	10.1	2.7	11.8	5.9	4.0	3.8	1.8	0.7	39.0	3
Wellega	9.9	0.7	7.0	6.4	5.8	4.1	0.9	0.4	33.2	5
Wollo	4.9	0.5	1.3	3.8	0.7	0.8	1.4	0.0	13.0	12
Total	8.6	0.7	4.0	6.1	4.4	3.3	1.5	0.5	27.8	

Table 37 (a) - Percentage of persons reporting illness or injury by source of treatment, duration of illness or injury and sex of persons - (Round 1)

Sex and Number of Days ill or injured	Treated in Health Institution or Community Health Agent	Treated by Others	Not Stated	Not Treated	Total	Number of ill or injured Persons in the sample
Male						
1 - 3	6.7	16.4	2.0	74.9	100.0	1,496
4 - 6	12.0	16.6	.9	70.5	100.0	1,134
7 - 14	12.0	17.2	1.3	69.6	100.0	5,727
Not Stated	6.9	28.0	10.1	54.9	100.0	642
Total	10.7	17.7	2.0	69.6	100.0	8,999
Female						
1 - 3	4.1	16.1	2.1	77.7	100.0	1,545
4 - 6	7.6	14.3	2.4	75.7	100.0	1,297
7 - 14	10.1	14.8	1.4	73.6	100.0	6,712
Not Stated	6.5	27.6	13.2	52.7	100.0	438
Total	8.7	15.5	2.2	73.6	100.0	9,992
Both Sexes						
1 - 3	5.4	16.3	2.0	76.3	100.0	3,041
4 - 6	9.7	15.4	1.7	73.3	100.0	2,431
7 - 14	11.0	15.9	1.4	71.7	100.0	12,439
Not Stated	6.7	27.9	11.4	54.0	100.0	1,080
Total	9.7	16.6	2.1	71.7	100.0	18,991

Table 37 (b) - Percentage of persons reporting illness or injury by source of treatment, duration of illness or injury and sex of persons - (Round 2)

Sex and Number of Days ill or injured	Treated in Health Institution or Community Health Agent	Treated by Other	Not Stated	Not Treated	Total	Number of ill or injured Persons in the sample
Male						
1 - 3	6.1	20.5	1.5	71.9	100.0	1,265
4 - 6	10.8	20.8	1.1	67.3	100.0	1,096
7 - 14	10.6	18.4	.9	70.1	100.0	5,683
Not Stated	8.7	27.3	7.5	56.6	100.0	633
Total	9.8	19.7	1.5	69.0	100.0	8,677
Female						
1 - 3	4.9	18.3	1.6	75.2	100.0	1,336
4 - 6	8.8	18.5	1.7	70.9	100.0	1,335
7 - 14	9.5	16.9	.9	72.8	100.0	6,705
Not Stated	8.8	20.4	13.7	57.2	100.0	408
Total	8.7	17.4	1.6	72.2	100.0	9,784
Both Sexes						
1 - 3	5.5	19.4	1.5	73.6	100.0	2,601
4 - 6	9.7	19.6	1.5	69.3	100.0	2,431
7 - 14	10.0	17.6	.9	71.5	100.0	12.388
Not Stated	8.7	24.6	9.9	56.8	100.0	1,041
Total	9.2	18.5	1.6	70.7	100.0	18,461

Table 38 (a) - Percentage of persons reporting illness or injury by source of treatment, duration of restricted activity and sex of persons -(Round 1)

Sex and Days of Restricted Activity	Treated in Health Institution or Community Health Agent	Treated by Others	Not Stated	Not Treated	Total	Number of ill or injured Persons in the sample
Male						
0	21.7	2.8	2.5	73.1	100.0	74
1 - 3	10.1	18.4	1.4	70.2	100.0	1,881
4 - 6	13.2	22.6	1.2	63.0	100.0	1,049
7 - 14	17.3	21.0	1.6	60.1	100.0	2,169
Not Stated	6.5	14.4	2.7	76.4	100.0	3,826
Total	10.7	17.7	2.0	69.6	100.0	8,999
Female						
0	22.6	10.1	1.0	66.3	100.0	67
1 - 3	6.0	16.0	1.5	76.5	100.0	1,941
4 - 6	11.0	18.2	1.7	69.1	100.0	1,234
7 - 14	15.7	18.1	1.6	64.6	100.0	2,597
Not Stated	4.8	13.0	3.0	79.2	100.0	4,153
Total	8.7	15.5	2.2	73.6	100.0	9,992
Both Sexes						
0	22.0	5.8	1.9	70.2	100.0	141
1 - 3	8.1	17.2	1.4	73.3	100.0	3,822
4 - 6	12.1	20.3	1.5	66.2	100.0	2,283
7 - 14	16.4	19.4	1.6	62.6	100.0	4,766
Not Stated	5.6	13.7	2.8	77.9	100.0	7,979
Total	9.7	16.6	2.1	71.7	100.0	18,991

Table 38 (b) - Percentage of persons reporting illness or injury by source of treatment, duration of restricted activity and sex of persons - (Round 2)

Sex and Days of Restricted Activity	Treated in Health Institution or Community Health Agent	Treated by Others	Not Stated	Not Treated	Total	Number of ill or injured Persons in the sample
Male						
0	11.3	12.1	.6	76.0	100.0	135
1 - 3	8.2	24.0	1.2	66.6	100.0	1,756
4 - 6	14.5	22.3	.8	62.4	100.0	968
7 - 14	16.6	24.2	.7	58.4	100.0	1,742
Not Stated	6.5	15.4	2.1	76.0	100.0	4,076
Total	9.8	19.7	1.5	69.0	100.0	8,677
Female						
0	5.8	15.9	.8	77.6	100.0	147
1 - 3	8.1	19.5	1.0	71.4	100.0	1,975
4 - 6	13.7	23.0	.9	62.4	100.0	1,188
7 - 14	15.3	22.0	.7	62.0	100.0	2,159
Not Stated	4.5	12.7	2.6	80.2	100.0	4,315
Total	8.7	17.4	1.6	72.2	100.0	9,784
Both Sexes						
0	8.4	14.1	.7	76.8	100.0	282
1 - 3	8.2	21.6	1.1	69.1	100.0	3,731
4 - 6	14.1	22.7	.9	62.4	100.0	2,156
7 - 14	15.9	23.0	.7	60.4	100.0	3,901
Not Stated	5.5	14.0	2.4	78.1	100.0	8,391
Total	9.2	18.5	1.6	70.7	100.0	18,461

Table 39 - Percentage of persons (aged 10 years and above) reporting illness or injury by source of treatment, education of head of household and by sex of persons - (Round 2)

Highest Grade Completed by Head of household and Sex	Treated in Health Institution or Community Health Agent	Treated by Others	Not Stated	Not Treated	Total	Number of persons in the sample	
						Ill or Injured	Total
Literate:							
Not definable by level							
Male	9.4	19.3	.1	71.3	100.0	941	2,808
Female	7.9	16.7	.1	75.3	100.0	990	2,596
Both Sexes	8.6	18.0	.1	73.3	100.0	1,931	5,404
1 - 3							
Male	12.7	19.5	.0	67.9	100.0	292	998
Female	14.9	14.6	.0	70.5	100.0	344	1,000
Both Sexes	13.9	16.9	.0	69.3	100.0	636	1,998
4 - 6							
Male	20.4	27.2	.0	52.4	100.0	102	384
Female	26.0	14.5	.0	59.6	100.0	122	366
Both Sexes	23.4	20.4	.0	56.2	100.0	224	750

Table 39 (Contd.)

Highest Grade Completed by Head of household and Sex	Treated in Health Institution or Community Health Agent	Treated by Others	Not Stated	Not Treated	Total	Number of persons in the sample	
						Ill or Injured	Total
7 - 8							
Male	15.0	49.6	.0	35.5	100.0	22	69
Female	16.3	36.3	.0	47.4	100.0	20	65
Both Sexes	15.6	43.5	.0	40.9	100.0	42	134
9 & above							
Male	9.2	51.8	.0	39.0	100.0	27	127
Female	18.5	2.4	.0	79.1	100.0	31	121
Both Sexes	15.4	18.7	.0	65.8	100.0	58	248
Illiterate							
Male	9.2	19.5	.2	71.0	100.0	4,492	14,061
Female	6.9	16.8	.1	76.2	100.0	5,522	14,651
Both Sexes	8.0	18.1	.1	73.8	100.0	10,014	28,712

Table 39 (Contd.)

Highest Grade Completed by Head of household and Sex	Treated in Health Institution or Community Health Agent	Treated by Others	Not Stated	Not Treated	Total	Number of persons in the sample	
						Ill or Injured	Total
Not Stated							
Male	47.5	22.1	.0	30.3	100.0	4	37
Female	38.9	9.7	.0	51.4	100.0	17	42
Both Sexes	40.5	11.9	.0	47.6	100.0	21	79
Total							
Male	9.7	19.8	.2	70.3	100.0	5,880	18,484
Female	7.9	16.6	.1	75.3	100.0	7,046	18,841
Both Sexes	8.8	18.1	.1	73.0	100.0	12,926	37,325

Table 40 - Percentage of persons (aged 10 Years and above) reporting illness or injury by source of treatment received, marital status and sex(Round 2)

Marital Status and Sex	Treated in Health Institution or Community Health Agent	Treated by Others	Not Treated	Not Stated	Total	Number of persons in the sample	
						Ill or Injured	Total
Single							
Male	8.4	22.1	69.4	.0	100.0	1,579	7,211
Female	7.8	18.4	73.7	.1	100.0	978	4,360
Both Sexes	8.2	20.7	71.1	.1	100.0	2,557	11,571
Married							
Male	10.4	19.1	70.2	.2	100.0	3,994	10,424
Female	8.9	16.8	74.3	.0	100.0	4,598	11,436
Both Sexes	9.6	17.9	72.4	.1	100.0	8,592	21.860
Divorced							
Male	2.7	11.5	85.8	.0	100.0	95	226
Female	4.0	14.8	81.2	.0	100.0	941	1,855
Both Sexes	3.9	14.5	81.7	.0	100.0	1,036	2,081

Table 40 (Contd.)

Marital Status and Sex	Treated in Health Institution or Community Health Agent	Treated by Others	Not Treated	Not Stated	Total	Number of persons in the sample	
						Ill or Injured	Total
Widowed							
Male	6.9	21.2	71.9	.0	100.0	201	554
Female	6.1	14.4	79.0	.5	100.0	519	1,130
Both Sexes	6.3	16.4	76.9	.4	100.0	720	1,684
Not Stated							
Male	9.8	8.4	81.8	.0	100.0	11	69
Female	14.7	30.9	49.6	4.8	100.0	10	60
Both Sexes	11.6	16.8	69.8	1.8	100.0	21	129
Total							
Male	9.7	19.8	70.3	.2	100.0	5,880	18,484
Female	7.9	16.6	75.3	.1	100.0	7,046	18,841
Both Sexes	8.8	18.1	73.0	.1	100.0	12,926	37,325

Table 41 - Percentage of persons reporting Illness or Injury by type of Treatment received, Religion of Head of Household and sex of persons - (Round 2)

Relegion of Head of Household and Sex	Treated in Health Institution or Community Health Agent	Treated by Others	Not Treated	Not Stated	Total	Number of persons in the sample	
						Ill or Injured	Total
Orthodox							
Male	9.2	18.0	71.3	1.5	100.0	5,376	16,297
Female	7.8	16.6	74.1	1.6	100.0	5,999	16,246
Both Sexes	8.5	17.2	72.8	1.5	100.0	11,375	32,543
Other Christian							
Male	10.6	25.5	62.1	1.9	100.0	502	1,882
Female	16.0	21.6	61.0	1.3	100.0	607	1,960
Both Sexes	13.5	23.4	61.5	1.6	100.0	1,109	3,842
Moslem							
Male	10.1	21.4	67.3	1.2	100.0	2,192	8,507
Female	7.3	18.5	72.4	1.7	100.0	2,524	8,613
Both Sexes	8.7	19.9	70.0	1.5	100.0	4,716	17,120

Table 41 (Contd.) •

Relegion of Head of Household and Sex	Treated in Health Institution or Community Health Agent	Treated by Others	Not Treated	Not Stated	Total	Number of persons in the sample	
						Ill or Injured	Total
Other							
Male	13.6	22.1	62.1	2.2	100.0	558	2,310
Female	15.4	15.6	66.5	2.5	100.0	592	2,388
Both Sexes	14.6	18.8	64.4	2.3	100.0	1,150	4,698
Not Stated							
Male	13.6	28.2	58.2	.0	100.0	49	188
Female	7.0	25.9	67.1	.0	100.0	62	224
Both Sexes	10.0	26.9	63.1	.0	100.0	111	412
Total							
Male	9.8	19.7	69.0	1.5	100.0	8,677	29,184
Female	8.7	17.4	72.2	1.6	100.0	9,784	29,431
Both Sexes	9.2	18.5	70.7	1.6	100.0	18,461	58,615

Table 42 (a) - Percentage distribution of persons utilizing various types of treatment facilities by Disease groups during reference period and severity of Illness (as measured by days of restricted activity) - (Round 1)

Disease Groups and Days of Restricted Activity	Type of Treatment Sought								
	None	Health Institution or Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Total	Persons in the sample
All Fevers									
None	80.7	7.1	1.8	5.0	2.6	2.2	.7	100.0	391
1 - 6	68.0	13.2	5.7	6.4	3.4	1.7	1.5	100.0	819
7 - 14	53.6	27.5	7.1	5.3	3.1	1.9	1.4	100.0	689
Total	65.7	16.9	5.4	5.7	3.2	1.9	1.3	100.0	1,899
All Coughs									
None	82.5	5.4	3.2	3.7	1.4	3.3	.6	100.0	1,057
1 - 6	69.0	9.1	6.3	4.9	3.7	5.7	1.2	100.0	859
7 - 14	55.3	16.8	10.2	6.2	7.6	2.8	1.0	100.0	678
Total	70.7	9.6	6.1	4.8	3.8	4.0	.9	100.0	2,594
All Diarrhoeas and other Abdominal Conditions									
None	78.4	6.1	3.4	4.6	3.5	3.3	.7	100.0	1,478
1 - 6	70.4	11.0	4.2	5.1	4.4	4.5	.5	100.0	1,576
7 - 14	60.3	17.2	5.7	7.3	4.4	3.3	1.8	100.0	885
Total	70.9	10.7	4.2	5.4	4.1	3.8	.9	100.0	3,939

Table 42 (a) (Contd.)

Disease Groups and Days of Restricted Activity	Type of Treatment Sought								
	None	Health Institution or Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Total	Persons in the sample
All Head and Neck Conditions									
None	82.8	4.8	2.2	4.4	2.5	2.5	.8	100.0	1,673
1 - 6	73.5	6.5	3.4	5.4	5.9	4.5	.7	100.0	1,425
7 - 14	67.5	12.5	4.9	7.2	3.4	3.0	1.5	100.0	852
Total	76.2	7.1	3.2	5.4	3.9	3.3	.9	100.0	3,950
All Venereal Diseases									
None	84.4	5.6	.9	6.8	.1	2.2	.0	100.0	117
1 - 6	81.1	9.7	3.8	1.4	.4	3.7	.0	100.0	93
7 - 14	71.3	9.2	2.1	10.7	1.1	1.5	4.2	100.0	68
Total	80.0	7.9	2.2	5.9	.4	2.5	1.1	100.0	278
All Skin Conditions									
None	82.6	7.9	1.1	3.0	3.0	1.5	.9	100.0	942
1 - 6	70.7	7.9	3.3	6.5	3.8	7.0	.8	100.0	363
7 - 14	69.6	11.7	3.3	8.1	5.3	1.7	.2	100.0	457
Total	76.9	8.9	2.1	5.0	3.7	2.7	.7	100.0	1,762

Table 42 (a) (Contd.)

Disease Groups and Days of Restricted Activity	Type of Treatment Sought								
	None	Health Institution or Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Total	Persons in the sample
Maternal Health problems									
None	89.8	6.3	.0	.5	1.2	2.2	.0	100.0	89
1 - 6	78.6	5.3	5.8	6.7	2.4	1.2	.0	100.0	130
7 - 14	60.2	19.6	8.3	6.9	3.1	1.1	.8	100.0	142
Total	75.5	10.7	4.9	4.8	2.3	1.5	.3	100.0	361
All Other Conditions (including not stated)									
None	86.2	3.0	1.7	3.7	2.0	2.4	1.1	100.0	1,444
1 - 6	71.1	10.7	3.3	6.8	3.7	3.4	.9	100.0	1,032
7 - 14	70.2	12.1	2.7	9.6	2.6	2.1	.7	100.0	968
Total	77.1	7.9	2.5	6.3	2.7	2.6	.9	100.0	3,444
Total									
None	82.5	5.4	2.2	4.0	2.5	2.6	.8	100.0	7,191
1 - 6	71.0	9.7	4.4	5.6	4.2	4.2	.8	100.0	6,297
7 - 14	62.9	16.2	5.6	7.4	4.1	2.5	1.2	100.0	4,739
Total	73.4	9.7	3.8	5.5	3.5	3.1	.9	100.0	18,227

Table 42(b) - Percentage distribution of persons utilizing various types of treatment facilities by disease groups during reference period and severity of Illness (as measured by days of restricted activity) - (Round 2)

Disease Groups and Days of Restricted Activity	Type of Treatment Sought								
	None	Health Institution or Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Total	Persons in the sample
All Fevers									
None	74.9	11.0	6.5	2.4	3.7	.8	.7	100.0	383
1 - 6	57.3	16.8	7.0	5.4	8.6	3.6	1.2	100.0	626
7 - 14	44.7	20.7	10.9	9.5	8.9	1.9	3.5	100.0	490
Total	57.4	16.7	8.2	6.0	7.5	2.4	1.8	100.0	1,499
All Coughs									
None	81.4	4.7	2.0	2.9	3.5	3.4	2.1	100.0	1,542
1 - 6	70.0	9.3	6.0	4.2	4.1	5.6	.8	100.0	1,203
7 - 14	58.0	15.9	8.9	7.4	4.7	3.1	2.0	100.0	597
Total	72.8	8.5	4.8	4.2	4.0	4.2	1.6	100.0	3,342
All Diarrhoeas and other Abdominal Conditions									
None	79.1	5.7	3.4	4.6	3.4	2.6	1.2	100.0	1,361
1 - 6	63.0	13.2	5.4	6.9	5.8	3.9	1.8	100.0	1,366
7 - 14	54.1	17.7	6.7	10.4	5.5	2.3	3.3	100.0	643
Total	67.5	11.1	4.9	6.7	4.8	3.1	1.9	100.0	3,370

Table 42 (b) (Contd.)

Disease Groups and Days of Restricted Activity	Type of Treatment Sought								
	None	Health Institution or Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Total	Persons in the sample
All Head and Neck Conditions									
None	85.3	2.9	2.3	3.5	2.5	2.9	.7	100.0	1,819
1 - 6	70.3	7.0	3.3	8.3	5.2	4.5	1.4	100.0	1,562
7 - 14	65.2	11.9	5.3	6.3	5.7	2.8	2.8	100.0	800
Total	75.8	6.1	3.2	5.8	4.1	3.5	1.4	100.0	4,181
All Venereal Diseases									
None	84.9	7.9	1.6	2.5	.6	2.5	.0	100.0	132
1 - 6	64.6	10.6	.8	8.8	7.7	7.4	.0	100.0	79
7 - 14	54.5	18.3	2.6	14.4	4.4	1.4	4.4	100.0	44
Total	72.8	10.7	1.5	6.8	3.5	3.8	.8	100.0	255
All Skin Conditions									
None	81.9	6.8	2.0	3.8	2.8	1.8	.9	100.0	1,001
1 - 6	71.2	6.9	3.6	7.5	4.2	5.2	1.3	100.0	345
7 - 14	62.9	12.8	4.8	9.8	5.9	2.3	1.6	100.0	372
Total	75.8	8.1	2.9	5.8	3.7	2.6	1.1	100.0	1,718

Table 42 (b) (Contd.)

Disease Groups and Days of Restricted Activity	Type of Treatment Sought								
	None	Health Institution or Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Total	Persons in the sample
Maternal Health problems									
None	85.8	11.6	.8	1.6	.0	.1	.0	100.0	101
1 - 6	64.9	15.9	2.5	5.4	4.5	5.3	1.6	100.0	115
7 - 14	63.0	21.0	2.2	6.0	1.3	5.4	1.1	100.0	127
Total	70.6	16.4	1.9	4.4	2.0	3.7	.9	100.0	343
All other Conditions (including not stated									
None	82.4	3.9	1.5	6.8	2.0	2.3	1.2	100.0	1,232
1 - 6	69.9	8.1	3.8	8.4	5.1	3.1	1.6	100.0	899
7 - 14	68.1	14.1	3.5	6.5	3.6	1.8	2.3	100.0	811
Total	74.7	7.9	2.7	7.2	3.4	2.4	1.6	100.0	2,942
Total									
None	82.0	5.1	2.4	4.1	2.8	2.5	1.1	100.0	7,571
1 - 6	67.2	10.1	4.7	6.8	5.4	4.4	1.4	100.0	6,195
7 - 14	59.7	15.5	6.3	8.1	5.4	2.4	2.6	100.0	3,884
Total	71.8	9.2	4.1	5.9	4.3	3.2	1.5	100.0	17,650

Table 43 (a) - Percentage of persons utilizing various types of treatment facilities by cause of injury during reference period and severity of injury (as measured by days of restricted activity) - (Round 1)

Cause of Injury and Days Restricted	Type of Treatment Sought									
	None	Health Institution	Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Total	Injured Persons in the Sample
Accidental Fall										
None (including not stated)	70.4	3.9	.0	.6	9.4	5.9	9.9	.0	100.0	136
1 - 6	63.2	3.9	.3	4.1	13.2	8.2	5.3	1.8	100.0	192
7 - 14	34.5	10.6	.3	2.0	31.2	16.4	3.3	1.7	100.0	96
Total	58.6	5.5	.2	2.6	16.3	9.4	6.2	1.2	100.0	424
Injuries by Domestic Animals										
None (including not stated)	77.1	2.8	2.4	1.6	4.6	1.6	5.8	4.0	100.0	42
1 - 6	51.3	2.3	.0	8.7	14.9	4.3	18.6	.0	100.0	51
7 - 14	28.1	23.2	1.5	10.4	25.6	5.5	5.8	.0	100.0	30
Total	56.5	6.3	1.1	6.4	13.1	3.5	11.6	1.5	100.0	123
Accidental burns										
None (including not stated)	83.3	1.0	.0	.0	7.7	8.0	.0	.0	100.0	16
1 - 6	59.4	5.1	.0	7.6	10.7	9.7	1.6	5.9	100.0	34
7 - 14	49.5	6.1	.0	3.6	6.7	21.5	4.3	8.2	100.0	17
Total	62.3	4.4	.0	4.8	9.0	12.4	2.0	5.1	100.0	67

Table 43 (a) (Contd.)

Cause of Injury and Days Restricted	Type of Treatment Sought									Injured Persons in the Sample
	None	Health Institution	Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Total	
Accidents by Firearms										
None (including not stated)	46.1	16.9	.0	7.6	.0	.0	29.5	.0	100.0	18
1 - 6	55.0	2.5	.0	2.2	11.0	15.4	13.9	.0	100.0	25
7 - 14	58.4	10.3	.0	6.4	6.5	1.1	15.0	2.2	100.0	14
Total	53.2	8.2	.0	4.6	7.0	8.0	18.5	.5	100.0	57
Injuries purposley Inflicted by others										
None (including not stated)	52.3	47.7	.0	.0	.0	.0	.0	.0	100.0	11
1 - 6	48.6	7.0	.0	5.4	8.4	18.3	8.6	3.6	100.0	31
7 - 14	41.1	19.6	.0	13.1	.6	.0	25.6	.0	100.0	16
Total	47.1	17.7	.0	6.7	4.7	9.9	12.0	2.0	100.0	58
Bites and Stings										
None (including not stated)	65.7	26.1	.0	.0	.0	4.1	4.1	.0	100.0	14
1 - 6	55.7	16.0	.0	.0	20.2	8.0	.0	.0	100.0	12
7 - 14	20.8	25.3	.0	22.3	27.7	3.9	.0	.0	100.0	8
Total	49.9	22.9	.0	6.4	13.9	5.2	1.7	.0	100.0	34

Table 43 (a) (Contd.)

Cause of Injury and Days Restricted	Type of Treatment Sought									
	None	Health Institution	Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Total	Injured Persons in the Sample
All other causes										
None (including not stated)	69.5	4.0	1.2	1.2	5.9	6.3	11.6	.3	100.0	320
1 - 6	52.1	6.9	1.5	6.7	6.9	8.7	16.2	1.0	100.0	230
7 - 14	50.4	7.9	1.4	7.2	8.1	10.4	14.0	.5	100.0	124
Total	59.7	5.8	1.4	4.3	6.7	7.9	13.7	6	100.0	674
Total										
None (including not stated	69.6	5.7	.9	1.2	6.2	5.5	10.4	.5	100.0	557
1 - 6	56.1	5.4	.7	5.7	10.4	9.1	11.1	1.5	100.0	575
7 - 14	42.3	11.2	.8	6.3	16.8	11.3	9.8	1.3	100.0	305
Total	58.2	6.7	.8	4.2	10.2	8.2	10.6	1.1	100.0	1,437

Table 43 (b) - Percentage of persons utilizing various types of treatment facilities by cause of injury during reference period and severity of injury (as measured by days of restricted activity)-(Round 2)

Cause of Injury and Days Restricted	Type of Treatment Sought									
	None	Health Institution	Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Total	Injured persons in the sample
Accidental Fall										
None (including not stated)	80.4	3.3	.0	2.6	4.4	3.4	4.2	1.7	100.0	144
1 - 6	57.0	5.9	3.5	7.2	14.9	6.8	4.6	.0	100.0	152
7 - 14	54.6	3.1	2.6	3.6	30.6	3.8	.4	1.3	100.0	67
Total	65.3	4.3	2.0	4.7	14.4	4.9	3.6	.9	100.0	363
Injuries by Domestic Animals										
None (including not stated)	77.9	2.5	.0	2.2	4.9	2.9	9.7	.0	100.0	60
1 - 6	60.6	8.7	.0	2.2	11.2	9.3	8.1	.0	100.0	73
7 - 14	35.6	32.5	.0	.0	26.7	3.2	2.1	.0	100.0	34
Total	61.8	11.0	.0	1.8	12.0	6.0	7.5	.0	100.0	167
Accidental burns										
None (including not stated)	55.7	9.5	.0	7.6	7.0	20.2	.0	.0	100.0	36
1 - 6	53.6	5.3	5.6	6.9	8.2	9.1	6.1	5.2	100.0	36
7 - 14	17.7	25.8	1.5	.0	9.4	31.1	2.7	11.9	100.0	22
Total	44.0	12.6	2.6	5.1	8.2	19.1	3.1	5.3	100.0	94

Table 43 (b) (Contd.)

Cause of Injury and Days Restricted	Type of Tretment Sought									
	None	Health Institution	Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Total	Injured persons in the sample
Accidents by Firearms										
None (including not stated)	63.0	.0	.0	13.9	7.0	.0	16.0	.0	100.0	15
1 - 6	64.5	2.7	.0	2.7	.0	10.0	20.1	.0	100.0	23
7 - 14	26.5	21.5	.0	43.6	.0	.0	8.4	.0	100.0	11
Total	54.6	6.7	.0	15.6	1.7	5.1	16.2	.0	100.0	49
Injuries purposley Inflicted by others										
None (including not stated	63.7	10.3	.0	.0	.8	25.2	.0	.0	100.0	14
1 - 6	59.6	9.6	.0	9.0	3.0	9.4	3.4	6.1	100.0	18
7 - 14	11.7	46.8	.0	2.7	17.8	14.3	6.7	.0	100.0	23
Total	39.3	26.2	.0	4.3	9.1	14.8	4.1	2.1	100.0	55
Bites and Stings										
None (including not stated)	51.8	18.1	4.8	.0	.0	.0	25.3	.0	100.0	14
1 - 6	36.9	1.2	6.0	.0	47.9	3.2	4.8	.0	100.0	38
7 - 14	43.8	19.7	.0	.0	20.0	.0	16.5	.0	100.0	5
Total	39.6	4.7	5.5	.0	39.2	2.6	8.5	.0	100.0	57

Table 43 (b) (Contd.)

Cause of Injury and Days Restricted	Type of Treatment Sought									
	None	Health Institution	Community Health Agent	Pharmacy	Traditional Healer	Lay Treatment	Self Treatment	Other	Total	Injured persons in the Sample
All other causes										
None (including not stated)	67.7	5.6	.0	6.3	6.1	4.2	7.4	2.8	100.0	309
1 - 6	63.6	7.4	.0	4.0	7.2	5.3	11.1	1.3	100.0	198
7 - 14	43.8	12.0	5.2	5.2	4.3	16.5	11.1	1.8	100.0	80
Total	62.8	7.2	.7	5.3	6.3	6.4	9.3	2.1	100.0	587
Total										
None (Including not stated)	70.6	5.2	.1	5.0	5.4	5.2	6.7	1.9	100.0	592
1 - 6	58.4	6.4	1.8	4.6	12.9	6.7	8.3	1.1	100.0	538
7 - 14	39.3	17.1	2.7	4.8	16.5	11.8	5.5	2.3	100.0	242
Total	59.7	8.0	1.3	4.8	10.6	7.0	7.1	1.6	100.0	1,372

8.6 - Reasons for not seeking treatment from Health Institution or Community Health Agent.

Those ill or injured persons who did not seek treatment from health institution or community health agent were asked to give reason why they did not. The results of this are given in tables 44 (a) and 45 (a) for round 1 and in tables 44(b) and 45 (b) for round 2. Tables 44 (a) and 44 (b) show distribution of those not treated in health institution or community health agent (CHA) by reason and by age groups. The most frequented reason, in both rounds is "Too Expensive", 32.8% in the first round and 31.3% in the second round, followed by "Illness or Injury seen as self limiting", 13.6% in the first round and 21.0% during the second round. The least frequented reasons are "Too Long Waiting Time", 2.3% in the first and 2.1% in the second round and "Thought that I could not get the required medicine", 3.0% in the first round and 2.7% in the second. These results for both rounds show that ill or injured persons fail to seek treatment from health institutions for reasons other than lack of faith in their effectiveness. Those who did not given reasons also form a significant part of the ill or injured persons who did not seek treatment from health institution or CHA, 14.9% in the first and 5.0% in the second round. Further details on the distribution by age and sex are found in tables 44 (a) and 44 (b).

Tables 45 (a) and 45 (b) show the percentage distribution of those who did not seek treatment in any health institutions or community health agents by reason/number of days restricted for each disease group in rounds 1 and 2, respectively. There are variations in the value of the percentages for each given reason and disease group by severity of the disease, measured by the number of days of restricted activity. But in neither do these variations follow specific patterns.

Table 44 (a) - Percentage of reported Ill or Injured Persons who had treatment only from places other than health Institution or community Health Agent by age and reason for not seeking treatment in health institution or community Health Agent (Round 1)

Reasons and Sex	Age Groups in Years				
	Under 1	1-14	15-64	65+	Total
Too Distant					
Male	7.2	5.0	4.8	9.7	5.3
Female	2.7	4.2	5.5	6.8	5.1
Both Sexes	9.9	9.2	10.4	16.5	10.4
Too Expensive					
Male	15.1	16.2	17.0	21.0	16.9
Female	7.2	15.1	17.1	11.6	15.8
Both Sexes	22.3	31.3	34.1	32.7	32.8
Used Traditional Medicine					
Male	7.8	6.1	5.0	5.8	5.5
Female	8.4	7.9	5.6	3.4	6.3
Both Sexes	16.2	13.9	10.7	9.3	11.8
Did not believe it would help					
Male	1.6	2.3	1.8	7.0	2.3
Female	3.4	2.6	2.4	2.0	2.5
Both Sexes	5.0	4.9	4.2	9.0	4.7
Illness seen as self Limiting					
Male	10.0	8.1	6.9	6.5	7.3
Female	4.6	5.7	6.6	6.1	6.2
Both Sexes	14.7	13.8	13.5	12.7	13.6
Too Long waiting time					
Male	6.2	1.1	1.1	.8	1.3
Female	1.5	1.0	1.0	.0	1.0
Both Sexes	7.8	2.1	2.2	.8	2.3

Table 44 (a) (Contd.)

Reasons and Sex	Age Groups in Years				
	Under 1	1-14	15-64	65+	Total
Thought that I couldn't get the required Medicine					
Male	.6	1.7	1.6	.7	1.6
Female	.4	1.0	1.8	1.1	1.4
Both Sexes	1.0	2.6	3.4	1.8	3.0
Other reasons					
Male	1.9	3.1	3.6	1.8	3.3
Female	2.7	3.0	3.6	3.5	3.4
Both Sexes	4.5	6.1	7.2	5.3	6.7
No reasons given					
Male	13.0	7.8	7.7	7.9	7.9
Female	5.6	8.1	6.7	4.2	7.0
Both Sexes	18.7	15.9	14.4	12.1	14.9
Total					
Male	63.4	51.4	49.6	61.4	51.3
Female	36.6	48.6	50.4	38.6	48.7
Both Sexes	100.0	100.0	100.0	100.0	100.0
Number of persons who sought treatment in Health facilities other than Modern Health Services in the sample					
Male	66	476	897	116	1,555
Female	52	438	946	82	1,518
Both Sexes	118	914	1,843	198	3,073

Table 44 (b) - Percentage of reported Ill or Injured Persons who had treatment only from placesother than health Institution or community Health Agent by age and reason for not seeking treatment in health institution or community Health Agent (Round2)

Reasons and Sex	Age Groups in Years				
	Under 1	1-14	15-64	65+	Total
Too Distant					
Male	7.0	5.4	4.9	6.9	5.3
Female	3.5	6.4	6.3	2.5	6.0
Both Sexes	10.5	11.8	11.2	9.4	11.3
Too Expensive					
Male	10.5	16.0	16.4	15.2	15.9
Female	13.0	13.3	17.4	12.0	15.4
Both Sexes	23.5	29.3	33.8	27.2	31.3
Used Traditional Medicine					
Male	6.4	6.8	5.8	9.8	6.4
Female	3.5	5.4	3.9	3.0	4.4
Both Sexes	9.8	12.2	9.7	12.8	10.8
Did not believe it would help					
Male	5.4	3.7	4.6	5.5	4.4
Female	4.9	4.5	5.3	7.2	5.1
Both Sexes	10.3	8.1	10.0	12.8	9.5
Illness seen as self Limiting					
Male	11.9	10.2	10.2	9.4	10.2
Female	10.8	12.4	9.6	10.8	10.8
Both Sexes	22.7	22.6	19.8	20.1	21.0
Too Long waiting time					
Male	3.3	.6	1.5	.7	1.2
Female	.6	.9	.9	.2	.9
Both Sexes	3.9	1.5	2.4	.8	2.1

Table 44 (b) (Contd.)

Reasons and Sex	Age Groups in Years				
	Under 1	1-14	15-64	65+	Total
Thought that I couldn't get the required Medicine					
Male	.7	.9	1.4	5.1	1.3
Female	1.7	1.4	1.2	1.7	1.3
Both Sexes	2.3	2.3	2.6	6.8	2.7
Other reasons					
Male	8.1	3.9	2.8	1.2	3.4
Female	3.9	2.6	3.2	2.3	3.0
Both Sexes	12.0	6.5	6.1	3.5	6.4
No reasons given					
Male	4.0	2.7	2.5	4.1	2.8
Female	.9	3.0	1.8	2.4	2.2
Both Sexes	4.9	5.8	4.3	6.5	5.0
Total					
Male	57.1	50.2	50.2	57.9	51.0
Female	42.9	49.8	49.8	42.1	49.0
Both Sexes	100.0	100.0	100.0	100.0	100.0
Number of persons who sought treatment in Health Facilities other than Modern Health Services in the sample					
Male	100	609	812	97	1,618
Female	77	553	841	83	1,554
Both Sexes	177	1,162	1,653	180	3,172

Table 45 (a) - Percentage of persons having Illness during reference period who stated reasons for not using modern health services (health inistitutions or Community health Agent) by Disease groups and Severity (as measured by Days restricted) - (Round 1)

Disease Groups and Days Restricted	Too distant	Too Expensive	Used Traditional medicine	Don't believe Helpful	Illness seen as self Limting	Too Long waiting time	Thought could not get the required medicine	Other reasons	No reasons given	Total
All Fevers										
None	18.2	11.9	37.8	35.1	11.4	.0	17.2	3.3	13.5	15.9
1 - 6	47.3	46.8	51.6	25.5	64.8	33.3	31.1	38.6	36.0	44.9
7 - 14	34.5	41.3	10.6	39.4	23.8	66.7	51.7	58.1	50.6	39.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All Coughs										
None	17.2	24.1	49.6	32.3	25.0	16.9	22.5	5.4	19.7	23.4
1 - 6	43.3	39.9	28.4	19.5	60.7	32.9	52.2	24.3	37.3	40.3
7 - 14	39.5	36.0	22.0	48.2	14.3	50.2	25.3	70.2	43.0	36.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All Diarrhoeas and other Abdominal Conditions										
None	18.2	27.8	20.8	49.0	43.0	35.4	11.1	43.3	29.9	30.4
1 - 4	49.6	39.3	57.2	22.9	40.7	48.7	57.3	29.7	40.6	41.8
7 - 14	32.2	32.9	22.0	28.1	16.3	15.9	31.7	27.0	29.5	27.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 45 (a) (Contd.)

Disease Groups and Days Restricted	Too distant	Too Expensive	Used Traditional medicine	Don't believe helpful	Illness seen as self limting	Too Long waiting time	Tought could not get the required medicine	Other reasons	No reasons given	Total
All Head & Neck Conditions										
None	20.2	31.7	41.1	35.9	39.6	35.3	23.5	26.2	30.3	32.4
1 - 6	56.4	39.4	44.7	35.0	43.5	45.7	42.7	42.6	46.7	43.4
7 - 14	23.4	28.9	14.2	29.0	16.9	19.0	33.8	31.2	22.9	24.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All Venereal Diseases										
None	46.5	20.2	44.4	18.5	39.7	.0	100.0	65.6	.0	35.5
1 - 6	26.7	15.4	33.0	81.5	47.4	.0	.0	34.4	.0	26.3
7 - 14	26.7	64.4	22.6	.0	12.9	.0	.0	.0	100.0	38.2
Total	100.0	100.0	100.0	100.0	100.0	.0	100.0	100.0	100.0	100.0
All Skin Conditions										
None	27.1	42.7	40.2	28.7	26.1	50.8	19.8	19.6	34.1	36.0
1 - 6	36.0	22.3	34.7	41.1	52.8	49.2	36.2	11.4	21.7	30.6
7 - 14	36.9	35.0	25.2	30.3	21.1	.0	44.0	69.0	44.2	33.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 45 (a) (Contd.)

Disease Groups and Days Restricted	Too distant	Too Expensive	Used Traditional medicine	Don't believe helpful	Illness seen as self linting	Too Long waiting time	Thought could not get the required medicine	Other reasons	No reasons given	Total
Maternal Health problems										
None	18.4	.0	.0	50.1	35.8	.0	100.0	.0	.0	9.1
1 - 6	15.1	12.7	35.7	49.9	40.6	100.0	.0	37.9	58.3	39.7
7 - 14	66.5	87.3	64.3	.0	23.6	.0	.0	62.1	41.7	51.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All Other Conditions										
None	59.1	52.7	51.7	32.8	57.2	36.5	70.0	67.1	71.1	55.6
1 - 6	27.8	27.2	19.1	21.3	25.5	48.3	15.9	17.0	17.4	23.8
7 - 14	13.0	20.1	29.2	45.9	17.3	15.1	14.1	15.9	11.4	20.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total										
None	28.o	32.8	40.5	35.4	39.8	30.8	38.9	32.6	33.9	34.6
1 - 6	42.7	35.7	37.0	26.6	43.1	47.6	34.5	27.4	35.5	36.8
7 - 14	29.3	31.5	22.5	38.0	17.1	21.6	26.6	39.9	30.6	28.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 45 (a) Contd.)

Disease Groups and Days Restricted	Too distant	Too Expensive	Used Traditional medicine	Don't believe helpful	Illness seen as self Limiting	Too Long waiting time	Thought could not get the required medicine	Other reasons	No reasons given	Total
Number of persons who sought treatment in Health Facilities other than modern Health services in the sample										
None	93	346	130	60	180	17	31	68	155	1,080
1 - 6	134	367	118	34	187	31	30	53	182	1,136
7 - 14	94	289	81	52	83	16	30	70	142	857
Total	321	1,002	329	146	450	64	91	191	479	3,073

Table 45 (b) - Percentage of persons having Illness during reference period who stated reasons for not using modern health services (health inistitutions or Community health Agent) by Disease groups and Severity (as measured by Days restricted) - (Round 2)

Disease Groups and Days Restricted	Too distant	Too expensive	Used Traditional medicine	Don't believe helpful	Illness seen as self limting	Too Long waiting time	Thought could not get the required medicine	Other reasons	No reasons given	Total
All Fevers										
None	14.4	17.6	10.1	9.7	10.6	49.8	14.9	19.9	6.6	14.3
1 - 6	43.3	45.4	40.5	65.9	60.6	42.3	33.6	34.2	17.2	46.2
7 - 14	42.3	37.0	49.4	24.5	28.8	7.9	51.4	46.0	76.2	39.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All Coughs										
None	25.0	29.0	42.5	40.5	46.5	4.0	8.9	17.0	38.6	33.5
1 - 6	43.0	41.8	25.6	33.7	44.0	66.0	64.0	56.0	23.0	41.7
7 - 14	32.1	29.2	31.9	25.8	9.5	30.1	27.1	27.0	38.4	24.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All Diarrhoeas and other Abdominal Conditions										
None	19.3	24.9	29.2	38.6	32.1	34.7	22.2	35.6	19.4	27.9
1 - 6	50.4	50.0	42.3	25.9	55.6	20.2	58.1	49.3	46.0	47.7
7 - 14	30.3	25.1	28.5	35.5	12.3	45.1	19.7	15.1	34.7	24.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 45 (b) (Contd.)

Disease Groups and Days Restricted	Too distant	Too expensive	Used Traditional medicine	Don't believe helpgul	Illness seen as self limting	Too Long waiting time	Thought could not get the required medicine	Other reasons	No reasons given	Total
All Head and Neck Conditions										
None	15.6	30.0	25.3	27.0	36.1	20.1	31.3	31.2	19.8	28.7
1 - 6	54.2	42.3	44.9	60.9	52.4	44.6	33.5	48.6	47.2	48.4
7 - 14	30.2	27.7	29.8	12.2	11.5	35.3	35.2	20.2	33.0	23.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All Venereal Diseases										
None	100.0	12.2	72.1	57.3	5.0	.0	.0	73.4	.0	22.3
1 - 6	.0	50.3	27.9	.0	52.6	100.0	100.0	.0	.0	46.8
7 - 14	.0	37.6	.0	42.7	42.4	.0	.0	26.6	.0	30.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	.0	100.0
All Skin Conditions										
None	43.5	33.1	34.5	36.2	68.2	37.5	33.0	56.8	12.2	40.3
1 - 6	24.5	36.0	35.9	28.2	16.8	19.0	13.3	17.0	22.4	28.8
7 - 14	32.1	3o.9	29.6	35.6	15.0	43.5	53.6	26.2	65.4	30.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 45 (b) (Contd.)

Disease Groups and Days Restricted	Too distant	Too Expensive	Used Traditional medicine	Don't believe helpful	Illness seen as self limting	Too Long waiting time	Thought could not get the required medicine	Other reasons	No reasons given	Total
Maternal Health problems										
None	34.6	1.1	.0	.0	8.1	.0	.0	1.6	.0	6.5
1 - 6	33.0	79.4	100.0	43.4	61.7	.0	21.7	19.6	.0	53.0
7 - 14	32.4	19.5	.0	56.6	30.2	.0	78.3	78.8	100.0	40.5
Total	100.0	100.0	100.0	100.0	100.0	.0	100.0	100.0	100.0	100.0
All Other Conditions										
None	47.7	49.1	60.0	59.8	57.6	7.9	41.4	62.7	89.3	55.4
1 - 6	30.1	28.7	25.2	19.3	32.3	50.0	35.3	17.2	5.8	26.4
7 - 14	22.2	22.2	14.8	20.9	10.0	42.1	23.3	20.1	4.8	18.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total										
None	25.3	31.7	36.4	39.2	40.8	22.7	27.4	37.0	34.0	34.2
1 - 6	43.0	40.8	35.7	37.7	45.9	42.9	39.6	38.3	29.1	40.6
7 - 14	31.8	27.5	27.9	23.1	13.3	34.3	33.1	24.7	36.9	25.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 45 (b) (Contd.)

Disease Groups and Days Restricted	Too distant	Too expensive	Used Traditional medicine	Con't believe helpful	Illness seen as self limting	Too Long waiting time	Thought could not get the required medicine	Other reasons	No reasons given	Total
Number of persons who sought treatment in Health Facilities other than Modern Health Services in the sample										
None	89	320	135	90	264	23	26	87	45	1,079
1 - 6	164	399	124	98	302	30	39	94	45	1,295
7 - 14	119	277	87	66	81	29	30	60	49	798
Total	372	996	346	254	647	82	95	241	139	3,172

8.7 - Delivery Practices of Mothers

Data on the types of delivery practices used by women, who gave birth to their last children during the two years preceding the date of interview, were collected in both rounds of the Health Survey. But since the time interval between the dates of the first and the second rounds was hardly five months one of the rounds has been considered to be redundant as regards delivery practices. Therefore it has been decided to present results of only the second round since it was considered to be more complete of the two as data on socio-demographic variables were collected only during that round. The results on "delivery aid" used by mothers during the two years preceding the date of interview in the second round are presented in tables 46, 47 and 48.

Table 46 shows the distribution of the types of delivery aid used by women in each age group for round 2. According to this table the most often used delivery aid was help from "lay persons", 45.7% of all mothers. The second facility in popularity was help from "traditional midwives", 38.6% of all women who gave birth to their last children within the two years preceding the survey date of the second round. The proportion who gave birth without help from any delivery aid in this round was also substantial: 13.8%.

The facility "medical personnel" seems to be used most among women aged 15 - 24 years (1.7%) and 35 - 44 years (1.0%). Of course, in total, the use of medical personnel for delivery aid among mothers has been reported to be very low: 1.1%, and usage of community health agent is even smaller: 0.3%, of all women who gave birth to their last child during the two years preceding the survey date of the second round. The probable reasons for this are:

a) Traditional or customary methods of delivery aid are much more likely to be available at any locality and at any time than medical personnel.

b) Women's lack of awareness as to the superiority and safety advantage of the use of medical personnel to using traditional or customary methods for delivery aid and

c) The expenditure needed for using medical personnel is much higher than would be needed in using, say traditional midwives or lay persons.

According to table 47 educational attainment of women mattered in the types of delivery aid they used in the second round. Of all literates who gave birth, 4.9% used medical personnel compared to a negligible 0.8% in the case of illiterate mothers. In fact the corresponding percentage for those who completed grades 9 and above is 33.6%. But this figure has to be taken with caution as the number of such women in the sample is very small. As a whole, as already mentioned above, help from lay persons was the most frequented delivery aid (45.7%) by mothers in the second round. It is closely followed by help from traditional midwives (38.6%).

Table 48 shows that in general a very small part of women of each religious group used "medical personnel" as delivery aid during the two years preceding the survey date of the second round. Comparing the use of medical personnel by religion it appears it was most common among followers of the orthodox religion, 1.2%. Moslem women scored second in using medical personnel as delivery aid, with 1.0% of them using the facility. Women belonging to the group"other christian" are a close third with 0.9% of them using medical personnel as delivery aid. Again the most popular delivery aid among persons belonging to each religious group except Islam is help from "lay persons." However, among moslems "traditional midwives" are the most popular. "Traditional midwives" are the second most commonly used delivery aid among every religious group except islam where lay persons are the second most popularly used. Of all women who gave birth to their last children in the two years preceding the survey (second round) 84.3% used traditional midwives and lay persons together for delivery aid in round 2 of the Health Survey.

Table 46 - Percentage Distribution of Women aged 10 years and above who gave Birth during the past two years by type of Delivery Aid and by Age - (Round 2)

Delivery Aid	Age in Years						
	10-14	15-24	25-34	35-44	45 & above	Not Stated	Total
Medical Personnel	.0	1.7	.7	1.0	.8	.0	1.1
Community Health Agent	22.0	.3	.3	.1	.3	.0	.3
Traditional Mid-wife	35.0	39.0	37.8	38.7	40.6	77.0	38.6
Lay Person	4.9	46.5	46.2	45.7	39.2	16.0	45.7
None	13.5	12.3	14.7	14.0	15.6	7.0	13.8
Not Stated	24.7	.1	.3	.4	3.5	.0	.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of Women who gave birth in the Sample	12	1,551	2,300	1,094	151	12	5,120

Table 47. Percentage Distribution of Women aged 10 Years and above who gave Birth during the two years Preceding the date of interview by type of delivery aid and by Education-(Round 2)

Delivery Aid	Literate:- Highest Grade Completed						Illete-rate	Not Stated	Grand Total
	Not Definable by Lavel	1 - 3	4 - 6	7 - 8	9 and Above	Total			
Medical Person	3.4	4.5	17.3	.0	33.6	4.9	.8	.0	1.1
Community Health Agent	1.3	.9	2.9	.0	.0	1.3	.2	.0	.3
Traditional Midwife	46.8	41.9	38.8	53.6	26.3	45.2	38.1	30.7	38.6
Lay Person	38.2	27.6	20.6	15.8	40.1	35.3	46.6	44.0	45.7
None	10.2	20.9	20.4	30.6	.0	12.6	13.9	25.2	13.8
Not Stated	.1	4.1	.0	.0	.0	.8	.5	.0	.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of Women who gave birth in the sample	290	89	24	4	10	417	4,696	7	5,120

Table 48 - Percentage Distribution of Women aged 10 years and above who gave Birth during the two years preceding the date of survey by type of Delivery aid and Relegion - (Round 2)

Delivery Aid	Religion					
	Orthodox	Other Christian	Moslem	Other	Not Stated	Total
Medical Personnel	1.2	.9	1.0	.1	1.1	1.1
Community Health Agent	.4	.4	.2	.0	.0	.3
Traditional Mid- Wife	34.2	24.9	56.7	13.7	21.3	38.6
Lay Person	54.0	34.5	32.2	53.4	50.0	45.7
None	9.9	38.5	9.1	32.5	27.5	13.8
Not Stated	.3	.8	.8	.2	.0	.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of Women who gave birth in the Sample	2,758	338	1,560	430	34	5,120

9 - COMMENTS ON SURVEY RESULTS

Having presented the survey findings it is appropriate to give some comments on the sampling and some of the important non-sampling errors. Therefore the comments on sampling errors, including estimation procedures, are presented in subsection 9.1 while the latter are briefly treated in subsection 9.2 below.

9.1 Estimation and Sampling Error

a) Estimation Procedure

According to the sample design adapted for the survey, regional estimates of total ill persons for eight illness groups (including the "residual group and not stated") were calculated using the following design-unbiased estimators.

$$\hat{Y}_h = \sum_{i=1}^{n_h} \hat{Y}_{hi}, \quad \text{where} \quad \hat{Y}_{hi} = \frac{H_{hi}}{n_h p_{hi} h_{hi}} \sum_{j=1}^{h_{hi}} y_{hij}$$

$$\hat{Y}_R = \sum_{h=1}^{K} \hat{Y}_h$$

Where

y_{hij} = Number of ill persons of a certain illness in the j^{th} household in the i^{th} FA in awraja " h ".

h_{hi} = Number of selected households in the i^{th} FA in awraja " h ".

H_{hi} = Total households in the i^{th} FA in awraja " h ".

P_{hi} = Probability of selection of the i^{th} FA in awraja "h".

n_h = Sample FAs in awraja "h".

$\hat{Y}_h$ = Estimated total of ill persons of a certain illness in awraja "h".

$\hat{Y}_R$ = Estimated total of ill persons in region "R"

K = Number of awrajas in region "R".

b) Estimation of Sampling Error

To assess the reliability of the estimates, variances ($\hat{V}$) and coefficient of variations (CV) of the estimates ($\hat{Y}$) are calculated. The formulae are given as follows.

$$\hat{V}(\hat{Y}_h) = \frac{n_h}{n_h - 1}\left(\sum_{i=1}^{n_h} \hat{Y}_{hi}^2 - \frac{\hat{Y}_h^2}{n_h}\right) :- \text{for awraja } (h)$$

$$\hat{V}(\hat{Y}_R) = \sum_{h=1}^{K} \hat{V}(\hat{Y}_h) :- \text{for region "R"}$$

$$CV(\hat{Y}_R) = \frac{\sqrt{\hat{V}(\hat{Y}_R)}}{\hat{Y}_R} \times 100 :- \text{for region "R"}$$

Following are table 49 (a) for first round and table 49 (b) for second round showing regional estimates of total ill persons ($\hat{Y}_R$) by eight illness groups, the standard deviations (SD) and coefficient of variations (CV). As can be seen from table 49 (a) 70% of the estimates have coefficient of variations less than 15% and 67%/of the estimates on table 49 (b) have coefficient of variations less than 15%. On the other hand all the regional estimates for total ill persons when the illness groups are put together have coefficient of variation less than 5% for each of the rounds (see last column of tables 49 (a) and 49 (b)). Similarly aggregate

totals of the 12 regions for each illness group have coefficient of variations less than 8% except for one illness group, namely venereal diseases, which is 12.49% for first round only.

Finally, all estimates with coefficient of variation less than or equal to 15% are here considered as good and reliable. But those estimates with coefficient of variation larger than 15%, especially for venereal diseases and maternal problems, are likely to have been affected by non-sampling errors. Specifically under-reporting of the prevalence of these diseases in many farmers associations and the cluster effect on the precision of estimates mainly explain the largeness of the values of these coefficient of variations.

Table 49 (a) Regional estimates of total ill persons ($\hat{Y}$), standard deviations (SD) and coefficient of variations (CV) for eight illness groups, including the "Residual Group and not stated" - (Round 1)

Region	Estimated* Value	Illness Groups								
		All Fevers	All Coughs	All Diarrhoea and Abdominal Conditions	Neck and Head Conditions	Venereal Diseases	Conditions on the skin	Maternal problems	Others including not stated	All Conditions (including not stated)
Arssi	$\hat{Y}$	38097	80958	140270	136981	9147	27247	9978	97934	540612
	SD	3784.213	5297.068	6936.680	6660.684	1652.517	2784.934	2065.654	5912.782	11442.918
	CV	9.933	6.543	4.945	4.862	18.066	10.221	20.702	6.038	2.117
Bale	$\hat{Y}$	6441	11649	22157	32054	1390	6538	3054	14565	97848
	SD	1053.112	1303.058	1611.902	1963.201	374.641	856.440	866.427	1813.169	3511.927
	CV	16.350	11.186	7.275	6.125	26.953	13.099	28.370	12.449	3.589
Gamo Gofa	$\hat{Y}$	86334	35597	44815	35646	265	35091	3428	56310	297486
	SD	4931.311	3203.823	3748.686	3370.168	265.000	3916.899	950.704	5196.981	9174.524
	CV	5.712	9.000	8.365	9.455	100.000	11.162	27.733	9.229	3.084
Gojjam	$\hat{Y}$	43657	92768	119198	202208	7544	131318	18841	244400	859934
	SD	5983.464	7834.703	9773.834	14148.795	2611.822	10190.596	5700.123	12996.531	23578.031
	CV	13.706	8.445	8.200	6.997	34.621	7.760	30.254	5.318	2.742
Gonder	$\hat{Y}$	139176	120659	265792	255288	3594	123480	28939	179858	1116786
	SD	12413.737	9834.662	15302.586	14304.122	1537.151	10793.694	4756.872	13622.810	28410.220
	CV	8.919	8.151	5.757	5.603	42.770	8.741	16.438	7.574	2.544

Table 49 (a) (Contd.)

Region	Estimated* Value	Illness Groups								
		All Fevers	All Coughs	All Diarrhoea and Abdominal Conditions	Neck and Head Conditions	Venereal Diseases	Conditions on the skin	Maternal problems	Others including not stated	All Conditions (including not stated)
Hararge	$\hat{Y}$	49281	71325	166196	120093	4972	29489	9946	89067	540369
	SD	7048.167	9265.145	13232.697	11673.221	2810.239	5706.003	3617.641	9853.562	23188.412
	CV	14.302	12.990	7.962	9.720	56.521	19.350	36.373	11.063	4.291
Illubabor	$\hat{Y}$	26486	45464	75286	76334	4905	50795	2480	75667	357417
	SD	2274.054	2931.652	4034.847	3903.986	985.439	3319.824	721.234	3914.087	6730.729
	CV	8.586	6.448	5.359	5.114	20.091	6.536	29.082	5.173	1.883
Kefa	$\hat{Y}$	103221	98936	158519	117878	1796	50065	11743	108979	651137
	SD	7999.500	7232.559	9336.399	7817.896	914.158	5538.108	2383.773	7315.256	16370.419
	CV	7.750	7.310	5.890	6.632	50.900	11.062	20.300	6.713	2.514
Shoa	$\hat{Y}$	195682	302845	369794	476271	66706	179344	31809	393623	2016074
	SD	16987.529	22103.142	23448.520	25328.386	9638.793	16514.073	6756.850	24459.085	51491.028
	CV	8.681	7.298	6.341	5.318	14.450	9.208	21.242	6.214	2.554
Sidamo	$\hat{Y}$	131372	165016	124026	124458	32802	83646	11236	163445	836001
	SD	10702.985	12468.310	10543.815	11088.585	5010.369	8738.641	3505.702	11869.987	24580.889
	CV	8.147	7.556	8.501	8.909	15.275	10.447	31.201	7.262	2.940

Table 49 (a) (Contd.)

Region	Estimated* Value	Illness Groups								
		All Fevers	All Coughs	All Diarrhoea and Abdominal Conditions	Neck and Head Conditions	Venereal Diseases	Conditions on the skin	Maternal problems	Others including not stated	All Conditions (including not stated
Wellega	$\hat{Y}$	81702	154842	292936	283450	16617	127621	26867	224983	1209018
	SD	5950.163	8008.261	10608.420	10273.111	2519.719	6917.268	3384.884	9276.051	16730.542
	CV	7.283	5.172	3.621	3.624	15.164	5.420	12.599	4.123	1.384
Wollo	$\hat{Y}$	72767	99188	207172	270860	14125	98931	31954	196227	991224
	SD	11292.718	12390.117	18654.388	21559.702	4663.921	14037.454	7546.598	19747.743	39382.737
	CV	15.519	12.492	9.004	7.960	33.019	14.189	23.617	10.064	3.973
Total	$\hat{Y}$	974216	1279247	1986161	2131521	163863	943565	190275	1845058	9513906
	SD	30241.520	34735.05	42926.28	44853.53	12959.05	30206.14	14376.51	42436.25	85901.06
	CV	3.10	2.72	2.16	2.10	12.49	3.20	7.56	2.33	0.91

*In this column, $\hat{Y}$ stands for "number of ill persons", SD = the standard deviation and CV = the coefficient of variation.

Table 49 (b) Regional estimates of total ill ($\hat{Y}$), standard deviations (SD) and coefficient of variations (CV) for eight illness groups, including the "Residual Group and not stated" - (Round 2)

Region	Estimated* Value	Illness Groups								
		All Fevers	All Coughs	Diarrhoea and Abdominal	Neck and Head	Venereal Diseases	Conditions on the skin	Maternal problems	Others including not stated	All Conditions (including not stated
Arssi	$\hat{Y}$	26456	80105	119412	131292	9644	39507	14981	62621	484018
	SD	3303.242	5760.747	7315.632	7251.295	1734.479	4400.199	2649.753	4586.440	12547.695
	CV	12.486	7.191	6.126	5.523	17.985	11.138	17.687	7.324	2.592
Bale	$\hat{Y}$	5385	22672	16777	26956	1459	8783	2225	7775	92032
	SD	830.277	1633.815	1323.947	1675.255	371.608	1006.965	484.691	933.108	2911.690
	CV	15.418	7.206	7.891	6.215	25.470	11.465	21.784	12.001	3.164
Gamo Gofa	$\hat{Y}$	50044	36853	34807	49759	589	23438	2292	46275	244057
	SD	4189.939	3493.722	3332.932	3987.206	418.512	3308.242	728.793	5148.698	8991.838
	CV	8.373	9.480	9.575	8.013	71.055	14.115	31.797	11.126	3.684
Gojjam	$\hat{Y}$	34392	128495	96529	175861	7059	116433	11232	152976	722977
	SD	5605.034	10493.518	10255.553	11890.773	2137.711	10748.489	2715.098	9940.557	22604.048
	CV	16.297	8.166	10.624	6.761	30.283	9.231	24.173	6.498	3.127
Gonder	$\hat{Y}$	142382	246216	353377	503987	5008	217267	32944	357352	1858533
	SD	10355.307	14731.083	17122.741	20164.558	1778.932	13818.409	4812.882	18286.862	30967.934
	CV	7.273	5.983	4.845	4.001	35.522	6.360	14.609	5.117	1.666

Table 49 (b) (Contd.)

Region	Estimated* Value	Illness Groups								
		All Fevers	All Coughs	All Diarrhoea and Abdominal Conditions	Neck and Head	Venereal Diseases	Conditions on the skin	Maternal problems	Others including not stated	All Conditions (including not stated
Hararge	$\hat{Y}$	33816	92392	123656	106979	1490	20719	11464	77778	468294
	SD	6316.762	9573.372	10939.285	10363.248	1085.799	4664.421	3551.470	8876.626	20674.737
	CV	18.680	10.362	8.847	9.687	72.872	22.513	30.979	11.413	4.415
Illubabor	$\hat{Y}$	19091	66934	75507	87315	2680	39074	4421	72577	367599
	SD	1879.864	3743.021	4060.676	4330.608	798.380	2980.282	981.576	3907.566	6941.897
	CV	9.847	5.592	5.378	4.960	29.790	7.627	22.203	5.384	1.888
Kefa	$\hat{Y}$	75392	172499	124981	134538	1682	55060	10043	86791	660986
	SD	6612.268	9432.777	8381.563	8847.217	993.986	5875.187	2494.357	7003.917	16809.472
	CV	8.771	5.468	6.706	6.576	59.096	10.671	24.837	8.070	2.543
Shoa	$\hat{Y}$	125149	368433	259930	489081	60201	168941	22692	289725	1784152
	SD	13571.339	24288.896	19226.446	26143.053	9337.863	16516.141	5452.861	19765.427	48559.352
	CV	10.844	6.592	7.397	5.345	15.511	9.776	24.030	6.822	2.722
Sidamo	$\hat{Y}$	88250	217542	89637	112547	28399	67550	12186	80060	696171
	SD	9180.106	14015.723	9159.025	10872.651	4637.306	7914.814	3492.663	8759.756	23453.847
	CV	10.402	6.443	10.218	9.661	16.329	11.717	28.661	10.941	3.369

Table 49 (b) (Contd.)

Region	Estimated* Value	Illness Groups								
		All Fevers	All Coughs	All Diarrhoea and Abdominal Conditions	Neck and Head	Venereal Diseases	Conditions on the skin	Maternal problems	Others including not stated	All Conditions (including not stated
Wellega	$\hat{Y}$	86447	225376	260665	318680	19554	130748	22507	190611	1254588
	SD	6324.096	9869.277	10249.983	10983.623	2657.192	7008.423	3040.276	8779.353	17334.972
	CV	7.316	4.379	3.932	3.447	13.589	5.360	13.508	4.606	1.382
Wollo	$\hat{Y}$	53922	100368	129344	188386	10951	100836	17120	175542	776469
	SD	10137.074	12912.922	13803.908	16339.158	3501.334	14177.514	4306.400	15994.647	32852.304
	CV	18.800	12.866	10.672	8.673	31.973	14.060	25.154	9.112	4.231
Total	$\hat{Y}$	740726	1757885	1760129	2325381	148716	988356	164107	1600083	9409876
	SD	25810.32	40253.63	37686.95	44866.37	11911.37	31440.46	11306.72	38177.40	82236.21
	CV	3.500	2.29	2.141	1.929	8.009	3.181	6.890	2.386	0.874

*In this column, Y stands for "number of ill persons", SD = the standard deviation and CV = the coefficient of variation.

9.2 - Comments on Non-sampling Errors

As already indicated in earlier sections, of central importance in both rounds of the health questionnaire are the two items on existence of morbidity, duration of illnesses, injuries, restricted activity and type of treatments received. The rest of the items are meant to collect information on health related items and socio-demographic variables whose inter-relations to the core items are intended to be examined. On the other hand, to collect data on the latter items, using the lay interviewers was not believed and has not been found to be particularly difficult while identifying correctly the existence and specific types of morbid conditions on persons, using lay interviewers, was expected and indeed was found to be not easy. Hence examining performance of the interviewers in identifying specific illness conditions should reveal the major weaknesses in the Health Survey. But before that, the quality of age-reporting during both rounds of the Health Survey is briefly examined, as age is an important variable in morbidity questions and as collecting data on ages correctly has been found to pose considerable difficulty in many developing countries, Ethiopia being one of them.

To evaluate the extent of age misreporting in the two rounds of the Health Survey, Myers' Blended Index of terminal digit preferences for ages 10 - 69 years and United Nations Age - Sex Accuracy Index for ages 0 - 69 years have been calculated and compared with similar results of other African countries. The results of these exercises are given in tables 50 (a) and (b) (combined), 51(a) & (b) (combined), 52 (a), 52 (b) and 53 (a) & (b) (combined). It must be noted that the results of most of the other African countries are for considerably earlier times.

According to tables 50(a) and (b) there is high positive preference for terminal digits of "0" and "5" (i.e. ages ending in "0" and "5") in both rounds of the Health Survey and this is true for either of the sexes. Positive preference for terminal digit "8" is also considerable in both rounds for each of the sexes. On the other hand terminal digit "9" and "1" are the least preferred (are avoided considerably) in both rounds by each of the sexes. Avoidance of terminal digits "3", "4" and "7" by each sex is also significant in both rounds. Terminal digits "2" and "6" are neither preferred nor avoided significantly by each of the sexes in both rounds. Preference for terminal digits appears to be more or less the same in both rounds. However there is considerable difference in the extent each terminal digit is preferred between the sexes.

The overall Myers' Blended Indexes for all terminal digits for males and females are 17.57 and 21.66 respectively in the first round and 15.75 and 19.79, respectively in the second round. These values compare favourably with results for a number of other African countries as shown in Table 51. It must however be noted that there are considerable differences between the dates of the Health Survey and of the other African countries indicated in tables 51 (a) & (b) (combined).

Fortunately such obvious weaknesses in the reporting of age by single years will not be of major concern to the results of the Health Survey as almost all ages have been grouped into fives or above in analysing and reporting its findings and results. What is of more concern is therefore age reporting in terms of five years age groups. To evaluate age misreporting by five years groups "age ratios" and "sex ratios", both in tables 52 (a) for the first round and 52 (b) for round 2, Age - Sex Accuracy Index, in tables 53 (a) & (b) (combined) for rounds 1 and 2 have been computed using the United Nations'

Method. According to tables 52 (a) and 52 (b) there are remarkable similarity, between the two rounds, in which age groups have surpluses and which have deficits for each of the sexes. However, there are some differences in the extent of having surpluses or deficit between the two rounds. In each of the rounds males have reported surpluses in the age groups 5 - 9, 25 - 29, 35 - 39, 45 - 49 and 60 - 64 years and deficits in the remaining of the age groups, while females have surpluses in the age groups 5 - 9, 25 - 29, 35 - 39, 50 - 54 and 60 - 64 years and deficits in the remaining of the age groups. The surplus and deficit age groups are also almost the same for both sexes the exceptions being the age groups 45 - 49 years for males and 50 - 54 years for females. Also the extent of becoming deficit in the age group 30 - 34 years for females in the first round and in the age group 10 - 14 years for males in the second round is so small that accurate age reporting can be assumed in these two age groups. Implicit in the above discussion is that if ages were reported accurately age ratios for any five years age groups would hardly deviate from 100.00. No doubt most of the above age misreporting is due to digital preferences and other forms of age misstatement.

As regards sex ratios in the different age groups the difference between the results of the first and second rounds is mainly of variations in degree of excess males or females in specific age groups. The age groups that have excess males and excess females are the same in both rounds: namely the age groups 0 - 4, 5 - 9, 10 - 14, 15 - 19, 40 - 44, 45 - 49, 55 - 59, 60 - 64 and 65 - 69 have excess males while the balance of the age groups have excess females. In fact the age groups 0 - 4 and 5 - 9 have very little excess in both rounds and especially the former age group has a sex ratio of almost 100 in the second round. Also the excess of females in the age group 50 - 54 for the second round is so small that it can be assumed there is practically parity

between the sexes.

The overall United Nations' Age - Sex Accuracy Indexes for rounds 1 and 2 are 71.7 and 58.7, respectively as indicated in tables 53 (a) & (b) (combined). According to the United Nations, Age - Sex reporting is accurate or inaccurate or highly inaccurate depending on whether this index is under 20 or 20 - 40 or over 40, respectively. Following this criterion the age sex reporting of either round is highly inaccurate. So are the age-sex data of a number of other African countries as shown in the above mentioned table. Of the nine other African countries for which age - sex accuracy indexes are included in the table, six rank as having highly inaccurate and only three as having inaccurate age - sex data. But readers are again reminded that there are differences between the dates to which data of the various countries correspond. An important factor in making the age - sex accuracy indexes in both rounds so high is the existence of variations in the extent of age misreporting, in specific age groups, between the sexes, thus making the sex ratios, which are heavily weighted,high.

Moreover the United Nations' age - sex accuracy index has been subjected to a number of criticisms. Among these are its "failure to account the expected gradual decline of the sex ratio with increasing age and of real irregularities in age distribution due to migration, war and epidemic as well as normal fluctuations in births and deaths; the use of a definition of age ratio which omits the central age group, and the considerable weight given to the sex ratio component in the formula".[11]

The degree to which the Health Survey results will be affected by age misreporting will, however, be substantially mitigated by presentation of relevant indicators in the form of ratios and other relative numbers leaving data users to arrive at needed absolute values by simple computations

from population estimates using these values. The results pertaining to population groups in both depleted and inflated age groups will probably be affected only minutely by age misreporting because: (a) the gain or loss in membership in most age groups is only small; (b) the gain or loss could not be morbidity selective; and (c) age specific disease do not have that fine age boundaries, most of the gain or loss being from the neighbourhood of the lower or upper boundaries.

Having said this the performance of interviewers in identifying specific illnesses (or perhaps more correctly, in assigning specific names of illnesses to sets of symptoms of morbidity) is given in the following pages, separately for each round. The intention here is not to blame the interviewers for lack of high performance. It must be remembered that without diagnostic aids it must have been really difficult for some of the interviewers to identify some of the diseases correctly. In some cases interviewers might have been forced to depend upon proxy respondents instead of talking to and probing the subjects.

(a) First Round

Table 54 (a) shows performance of interviewers in identifying specific illness conditions in each of the 12 regions in round 1. The table reveals that all the interviewers in the country have managed to identify only 44.7% of all reported illness conditions in the total population by their specific names, i.e case and groups, to which diseases belong, identified.

Variation of performance in such identification of morbid conditions by region is not that great, ranging from a low of 40.4% in Arssi to a high of 53.5% in Gamo Gofa.

This leaves 55.3% of the reported health complaints in the country unidentified by specific names. The figure is

further broken into 37.5% of all reported cases in the country identified only by the disease groups to which they belong (only groups identified) the remaining 17.8% of the cases having not been identified even by disease group (case and group not identified). The variations in the magnitudes of the "only group identified" and "case and group not identified" proportions by region are quite noticeable, ranging from as low as 25.6% in Gojjam to as high as 44.6% in Bale and from 13.0% in Bale to 26.8% in Gojjam, respectively.

It is clear from the above presentation that performance of the lay interviewers in identifying specific disease conditions during the first round has been low in the 12 regions as a whole and in each region. Performance in identifying the disease groups to which reported conditions belong is however much higher for each of the regions as well as for the total of 12 regions, the figure for the latter being 82.2% (i.e. 44.7% + 37.5%).

(b) Second Round

Table 54 (b) shows performance of interviewers (collectively) in identifying specific illness conditions in each of the 12 regions in round 2 of the Health Survey. Examination of this table reveals that there is little difference in performance of interviewers in identifying specific morbid conditions between the two rounds of the Health Survey. It seems that the efforts, made between the data collection periods of the two rounds, to improve the capability of the interviewers to identify specific morbid conditions have had no noticeable effect. In fact interviewers seem to have identified slightly less illness conditions by specific names in the second (43.6%) than in the first round (44.7%) of all reported morbid conditions in the

rural areas of the twelve regions. But the second round is more than compensated for in the "Only group identified" category with a performance of 40.8% of all cases in the entire sample being classified as "only group identified" in the second round compared to 37.5% in the first round. This leaves only 15.5% of all cases in the "case and group not identified" category in the second round compared to 17.8% in the first round. Thus performance in identifying at least the disease groups to which morbid conditions belong was a little better in the second than in the first round.

Undoubtedly performance in identifying specific illness conditions has been low in both rounds. This means that prevalence rates of most specific diseases will be substantially underestimated in both regional and aggregate (i.e. 12 regions) levels. However it could be said that performance in identifying disease groups has been adequately high in both rounds and this is encouraging as knowledge of prevalence rates of certain disease groups could not be considered to be devoid of any important uses for planning, plan implementation and evaluation.

Tables 50 (a) and (b) (Combined) - Myers' Blended Index of Terminal Digit Preferences within the ages of 10-69 years, by Sex - Rounds 1 and 2

	Terminal Digit (x)	Percentage Distribution of Population Reporting Ages with terminal digit (X)			Deviation of Percent From 10.00		
		Male	Female	Both Sexes	Male	Female	Both Sexes
ROUND 1	0	17.56	22.18	19.90	+7.56	+12.18	+9.90
	1	5.39	5.70	5.55	-4.61	- 4.30	-4.45
	2	10.16	9.77	9.96	+0.16	- 0.23	-0.04
	3	7.50	6.60	7.05	-2.50	- 3.40	-2.95
	4	7.24	6.41	6.82	-2.76	- 3.59	-3.18
	5	17.10	17.75	17.43	+7.10	+7.75	+7.43
	6	9.88	9.01	9.44	-0.12	-0.99	-0.56
	7	7.34	6.43	6.88	-2.66	-3.57	-3.12
	8	12.76	11.73	12.24	+2.76	+1.73	+2.24
	9	5.09	4.42	4.75	-4.91	-5.58	-5.25
	Index				17.57	21.66	19.56
ROUND 2	0	15.34	19.56	17.48	+5.34	+9.56	+7.48
	1	6.09	5.89	5.99	-3.91	-4.11	-4.01
	2	10.82	10.38	10.60	+0.82	+0.38	+0.60
	3	7.73	6.43	7.07	-2.27	-3.57	-2.93
	4	7.23	6.53	6.88	-2.77	-3.47	-3.12
	5	16.17	17.41	16.80	+6.17	+7.41	+6.80
	6	10.16	9.62	9.88	+0.16	-0.38	-0.12
	7	8.13	7.07	7.59	-1.87	-2.93	-2.41
	8	13.26	12.44	12.84	+3.26	+2.44	+2.84
	9	5.07	4.68	4.87	-4.93	-5.32	-5.13
	Index				15.75	19.79	17.72

Table 51 (a) and (b) (Combined) - Myers' Blended Index (for all terminal digits) by Sex for Selected Countries

Country	Date	Index	
		Male	Female
Ethiopia (Rural)			
Round 1	September 1982	17.6	21.7
Round 2	January 1983	15.8	19.8
Zambia	1969	14.8	15.8
Ghana (Rural)	1970	35.6	28.1
Botswana	1971	9.2	10.6
Mainland Tanzania (Rural)	1969	30.1	38.8
Liberia	1962	34.8	42.2
Morocco	1960	66.3	86.7
Kuwait	1965	50.3	66.4

Table 52 (a) - United Nations Age Ratios and Sex Ratios of the raised population by five years age groups - (Round 1)

Age Group	Analysis of Age Ratios				Sex Ratios
	Male		Female		
	Ratios	Deviations From 100	Ratios	Diviations From 100	
0 - 4	-	-	-	-	101.69
5 - 9	114.45	+14.45	118.89	+18.89	102.38
10 - 14	95.87	-4.13	90.29	-9.71	114.02
15 - 19	93.54	-6.46	78.92	-21.08	119.66
20 - 24	77.35	-22.65	58.82	-41.18	80.01
25 - 29	109.45	+9.45	111.37	+11.37	78.40
30 - 34	91.16	-8.84	99.14	-0.86	79.51
35 - 39	114.37	+14.37	104.90	+4.90	97.39
40 - 44	94.16	-5.84	93.03	-6.97	104.76
45 - 49	104.80	+4.80	92.82	-7.18	113.83
50 - 54	91.90	-8.10	114.27	+14.27	95.35
55 - 59	96.21	-3.79	76.70	-23.30	126.64
60 - 64	106.60	+6.60	131.98	+31.98	109.19
65 - 69	-	-	-	-	149.42

Table 52 (b) - United Nations Age Ratios and Sex Ratios of the raised population by five years age groups - (Round 2)

Age Group	Analysis of Age Ratios				Sex Ratios
	Male		Female		
	Ratios	Deviations From 100	Ratios	Deviations From 100	
0 - 4	-	-	-	-	100.39
5 - 9	112.70	+12.70	116.97	+16.97	101.65
10 - 14	99.59	-0.41	94.58	-5.42	113.48
15 - 19	94.97	-5.03	78.96	-21.04	122.62
20 - 24	73.01	-26.99	88.80	-11.20	81.51
25 - 29	114.74	+14.74	120.56	+20.56	76.91
30 - 34	86.05	-13.95	88.55	-11.45	80.07
35 - 39	116.67	+16.67	118.00	+18.00	89.29
40 - 44	96.02	-3.98	88.67	-11.33	105.05
45 - 49	105.31	+5.31	97.83	-2.17	110.64
50 - 54	89.19	-10.81	103.83	+3.83	99.39
55 - 59	98.24	-1.76	84.88	-15.12	124.46
60 - 64	105.47	+5.47	113.10	+13.10	119.88
65 - 69	-	-	-	-	134.78

Table 53 (a) and (b) (Combined) - United Nations Age-Sex Accuracy Index for Selected Countries - The age range for every country is 0-69 years

Country	Date	Index
Ethiopia (Rural)		
Round 1	September 1982	71.7
Round 2	January 1983	58.7
Zambia	1969	71.8
Botswana	1971	33.1
Ghana (Rural)	1970	52.3
Mainland Tanzania (Rural)	1969	72.0
Sierra Leone	1963	72.5
Liberia	1962	58.2
Algeria	1966	38.9
Tunisia	1966	30.9
Libya	1964	43.9

Table 54 (a) - Performance of interviewers in identifying specific illness conditions in each of the 12 Regions (Raised Population, Health Survey Round 1)

Region	Case and Group Identified	Conditions only Whose disease Groups have been identified (only Group Identified)	Conditions not Identified even by Disease groups (case and group not Identified)	Total
	Percent	Percent	Percent	Percent
Arssi	40.4	42.9	16.7	100.0
Bale	42.4	44.6	13.0	100.0
Gamo Gofa	53.5	29.6	16.9	100.0
Gojjam	47.6	25.6	26.8	100.0
Gonder	51.2	33.8	14.9	100.0
Hararge	42.9	42.4	14.7	100.0
Illubabor	45.6	36.2	18.2	100.0
Kefa	46.9	38.4	14.7	100.0
Shoa	41.7	40.6	17.7	100.0
Sidamo	44.5	37.3	18.2	100.0
Wellega	40.4	42.8	16.8	100.0
Wollo	46.0	35.4	18.7	100.0
Total	44.7	37.5	17.8	100.0

Table 54 (b) - Performance of interviewers in identifying specific illness conditions in each of the 12 Regions (Raised Population, Health Survey Round 2)

Region	Case and Group Identified	Conditions only Whose disease Groups have been identified (only Group Identified)	Conditions not Identified even by Disease groups (case and group not Identified)	Total
	Percent	Percent	Percent	Percent
Arssi	38.1	49.7	12.2	100.0
Bale	45.6	47.3	7.1	100.0
Gamo Gofa	48.1	34.4	17.5	100.0
Gojjam	50.8	28.9	20.4	100.0
Gonder	48.0	34.1	17.9	100.0
Hararge	41.4	47.7	11.0	100.0
Illubabor	41.2	41.1	17.7	100.0
Kefa	40.5	48.1	11.4	100.0
Shoa	41.1	43.9	15.1	100.0
Sidamo	43.5	46.1	10.4	100.0
Wellega	39.5	46.8	13.7	100.0
Wollo	46.1	32.4	21.5	100.0
Total	43.6	40.8	15.5	100.0

10 - CONCLUSION

At this stage it is perhaps appropriate to make some concluding remarks about the role of population based health surveys, using lay interviewers, in a health information system. It has already been mentioned above that the status of health of individuals is influenced and in fact, determined by the following factors: effects of the environment, behavioral pattern and life styles of the individuals, development and provision of health services and genetic and hereditary constitution of the individuals. Any health information system (if it is to be really effective) must collect and compile data not only about the health status of the population but also about the factors affecting health status.

Data generated from the health service system deals mainly with the system itself and also gives some indication about the health status of the population served by the system. But its ability to compile data about the health status of the population in general and about some of the factors affecting health status is quite limited. On the other hand data about the effects of the factors affecting status of health as well as on the health status of the population by major administrative or geographical subdivisions could be collected and compiled through a health survey as demonstrated by the survey treated by this paper. A health survey is advantageous not only because it enables collection of data on more areas affecting status of health and thus makes it possible to obtain indicators on the health status and each of most factors affecting health of the entire population but also because it enables making interrelations between the characteristics affecting the status of health.

True, more effort must be made to collect data accurately in order to improve the validity of the data or

indicators. As already indicated above, during the Rural Health Survey data were collected by truly lay personnel (i.e. persons who completed grade 12 only in academic schools). However, "Sufficient practical experience in Health Services to enable recognition of the complaints given in the categories used for recording and reporting" has been given, as one of four qualifications that such data collectors should have, in the World Health Organization (WHO) publication entitled "LAY REPORTING OF HEALTH INFORMATION" (Geneva, 1978). Moreover the WHO lay reporting scheme was designed to function in a health service facility (i.e. health station or health center) setting. That means the WHO scheme for lay reporting of health information recommends junior paramedicals as data collectors from persons who come to health service facilities seeking medical help.

However, while the WHO lay reporting scheme of health information was used as a basis for designing the Health Survey, it used lay interviewers because health assistants or other junior paramedicals were not available to it. But the decision to undertake a population based survey was deliberate. Even then it could not be concluded that the results obtained were utterly worthless. In fact it has already been indicated, in the last subsection, that data collection as it pertains to disease groups has been good.

It therefore appears reasonable to conclude that population based health surveys of the kind undertaken do have very useful role to play and fill much needed gaps in the health information system and have been started to be further developed. However, using lay persons as data collectors necessitates that the part on morbidity in such a health survey be kept to a minimum, as was done during the Health Survey, because if it contains a substantial number it will add to the difficulties in identifying illnesses.

NOTES

1. The definitions of "non-agricultural household" "agricultural household" and "holder" are given as follows: The definition of a holding is given first as it is basic to these definitions. A "holding" is all the land which is used wholly or partly for agricultural production and is operated as one technical unit by one person alone or with others, without regard to title, legal form, size or location.

   A Holder is a person who exercises management control over the operations of an agricultural holding and takes the major decisions regarding the utilization of available resources. He/she has technical and economic responsibility for the holding. He/she may operate the holding directly as an owner or as a manager.

   An Agricultural Household is a household at least one of whose members owns an agricultural holding and takes major decisions regarding the utilization of available resources.

   A Non-Agricultural Household is a household all of whose members are engaged in economic activities other than agriculture for their living.

   All the above definitions are taken from the CSO publication entitled "THE RURAL INTEGRATED HOUSEHOLD SURVEY PROGRAMME, METHODOLOGICAL REPORT FOR THE PERIOD OF 1980-83, Addis Ababa, February 1983, pages 50 - 51."

2. A Health Officer is a health personnel with a Bachelor of Science in public health trained in the Gonder Public Health College for four years to carry out preventive and curative activities in the Ethiopian condition. The training program has been canceled a few years back.

3. WHO Regional office for South - East Asia, RESEARCH NEEDS FOR HEALTH FOR ALL BY THE YEAR 2000, New Delhi, 1983, page 5.

4. From unpublished documents at the World Health Organization (WHO) head office, Geneva.

5. Ministry of Health of Colombia, National Institute of Health of Colombia, Colombian Association of Faculties of Medicine, NATIONAL HEALTH STUDY: Population and General Morbidity, Volume 1, Morbidity for the period 1977-80, Bogota, Republic of Colombia, 1983 (in Spanish)

6. From unpublished documents at the WHO Head Office, Geneva.

7. Federal Office of Statistics, THE HEALTH OF NIGERIANS, Health and Nutrition Status Survey (1983/84), Preliminary Results from First Quarter Survey (April-June 1983), Lagos, April 1984, page 30.

8. From unpublished documents at the WHO Head Office, Geneva.

9. The organizational framework of the Health Service System existing at about the time of the Health Survey can be described as follows. At the bottom is the farmers association area or the Kebele urban dwellers association based Community Health Agent. Above it is the Health Station next to which is the Health Center. Then there is the Medium/Rural Hospital above which is the Regional Hospital and at the top of all this is the Central Referal Hospital. Except for the Community Health Agent every type of health service facility (mentioned above) serves as a referal institution or hospital for the type(s) of institution(s) below it as well as rendering service to patients who refer there directly or for the first time. By far most of the health service facilities are public or government owned, only about 10.3% of the medium/rural hospitals, 0.6%

of the health centers and 5.6% of the health stations being mission - owned and 3.4% of the medium/rural hospitals being private owned by early 1982.

10. Protected water was defined in the instruction manual for both rounds of the Health Survey as follows. Within the context of present day rural Ethiopia the way water is protected depends upon the type of source. Wells and springs are protected almost the same ways as follows:-

1. A cement concrete wall must be built around the water in the well or spring.

   a) In the case of a well the concrete wall must penetrate the earth, depending on the type of soil, from 2 to 4 meters and should be about 70 cm. high above the ground.

   b) In the case of a spring the concrete wall must penetrate the earth until it touches the under lying rock and its top must be well above the ground. Moreover a tap for letting water out must be placed near the top on one side of the concrete wall.

2. There must be a cement concrete or other tight lid on top of the wall.

3. There must be conviniently located diversion canal(s) not too far from the water source to protect it from being flooded by water.

4. Polluting spots, like latrine, must be at least 25 to 30 meters away from the well or spring.

5. If such polluting spots are on a higher elevation than the well or spring then their distances must be much more than given in (4) above.

Piped water is considered protected if the source is protected. So if piped water is coming from a well or a spring the well or the spring must be protected as described above in order for the piped water to be considered protected. Piped water whose source is a river, a lake or a pond is considered protected if such a source is protected by scientifically treating it with chlorine and other pertinent chemicals. Otherwise water collected from rivers, lakes or ponds is not protected.

11. H.S. Shyrock, J.S. Siegel and Associates, THE METHODS AND MATERIALS OF DEMOGRAPHY, U.S. Government Printing Office, Washington, D.C., 1971, page 222.

12. Most of the text on PRETESTING THE SURVEY has been abstracted and adapted from a CSO Preliminary Report (unpublished) entitled PRETESTING THE QUESTIONNAIRE FOR THE NATIONAL HOUSEHOLD SURVEY PROGRAMME - HEALTH, Addis Ababa, May 1982.

APPENDIX 1 - PRETESTING THE SURVEY

The Health Survey questionnaire, instruction manual and data collection procedures were pretested on 100 households in a farmers' association (FA.). Following is a short presentation[12] of the objectives, procedures, findings and recommendation of the pretest.

- Objectives of the pretest

The objectives of the pretest, as originally laid down, are:

a) To improve on the design, content, formulation, etc. of the questionnaire with special emphasis on the illnesses and injuries

b) To find out the possible problems that might arise in administering the questionnaire in terms of:

   - interview situation
   - concepts & definitions
   - field organizations, etc.

c) To make preliminary test on the reliability and validity of the health interview methods.

- Pretest procedures

The actual pretest was undertaken in two phases:

Phase One:- Using Trained Lay Interviewers

Ten youths, who had completed high school, were first recruited from the immediate surroundings and given training, in administering the Health Survey questionnaire. Every attempt was made to replicate the actual survey conditions in recruiting and training of interviewers and other aspects. The training included self study of

manual, class explanation and discussion, mock interview and data collection practice in which each trainee interviewed four households in the field. The completed questionnaires were then checked and observed mistakes and inconsistencies pointed out to the trainees. Finally, the youths carried out the actual pretest in the FA which had been divided into 10 small area units, each consisting of about ten households. During the pretest the youths were being watched and supervised by three pairs of professionals and each, consisting of a health personnel and a statistician, was responsible for checking on three enumerators except one which was responsible for four youths. These professionals watched and checked on all aspects of the enumerators' performance and recorded any weaknesses in interviewing as well as on contents of the questionnaire and manual.

Phase Two:- Using Trained Senior Year Medical Students

This phase was carried out, the next day, by twenty one senior medical students, who completed the same questionnaire from the same 100 households after being given similar training on how to fill the questionnaire. During this phase the professionals checked questionnaires completed for the same households by the two groups against each other on the spot and whenever there were inconsistencies (especially on the morbidity part) the relevant completed questionnaires were given back to the concerned medical students for immediate verification, by going to the relevant households.

As soon as the data collection work by the medical students was over the two sets of questionnaires were checked against those completed by the medical students to see if there were any inconsistencies. This exercise involved making a number of consistency and other tables. Finally recommendations were made based on findings resulting from the observations made by the professionals during the actual data collection

as well as a thorough examination of these tables and checkings.

Pretest Findings and Recommendations

The summary of the findings and recommendations that resulted from the pretest are given below:-

a) A statement which enumerators should use when introducing themselves to members of sample households in the course of their work should be included in the manual to prevent them from making false promises when introducing themselves and failing to introduce themselves as was observed during the pretest. As it was observed that presence of guests and neighbours tended to influence the response of persons, instructions to collect data in the absence of guests should be included in the manual. Enumerators should also be instructed to be sure that they collect data from the head or spouse of each household, all the other members being present as much as possible and that this should also be included in the manual.

b) The list of disease groups and diseases to be indentified should be modified to make it more relevant to the Ethiopian condition. Moreover provisions should be made in the questionnaire for listing at most two illnesses per respondent as the pretest had shown that there were very few persons with more than two illnesses, the average being 1.38 diseases.

c) As the Amharic equivalent for the word injury or injured was understood by many respondents to mean getting hurt as a result of malnutrition, illness, overwork,.....etc. during the pretest it was suggested to rephrase it as "injury sustained due to some accident."

d) The common heading for the items on treatment should be reworded as "when you were ill or injured during the reference period did you get any treatment?" instead of "when you were ill or injured during the reference period did you get assistance from the following?" because during the pretest the word assistance implied financial or material assistance to many respondents.

e) The possible answers to reasons for not being treated in a health institution or community health agent need to be more exhaustive by adding: (1) "I thought it was self limiting", (2) "because waiting time is too long", (3) "I thought I could not get the required medicine" and (4) "Other (to include marginal practitioners)".

f) Since the Amharic equivalent for the term "defecate" was found to be offensive to many respondents it should be replaced by a more acceptable or polite term. Similarly on availability of latrine the Amharic wording which literaly stated "does the household has a pit for defecation?" should be reworded as" does the household has a toilet facility?"

g) In order to avoid underestimation of morbid cases enumerators should be instructed to probe well, especially to bring to light chronic cases like kidney, liver, heart diseases, leprosy, tuberculosis, blood pressure, gastrites, epilepsy, goiter .....etc.

h) In order to mitigate under reporting of treatments all possible sources of medical assistance should be given a column each in the questionnaire so that enumerators could ask about treatments sought from each source.

i) The items on birth history of and delivery aid to women must be modified as follows: Information should be sought of "all women aged 10 years and above" each of

whom should be asked whether she has given birth in the last 2 years and if yes, who helped her in delivering the baby. Moreover from among the precoded list of possible sources of delivery aid "1=health institution" should be changed to "1= health personnel" so as to include delivery aid given by a doctor, health officer, nurse or health assistance etc. at home.

j) Traditional healer is one of the possible sources of treatment for which a column is given in the questionnaire and could include the services of witch doctors. But as such services are disapproved and discouraged since the eruption of the revolution instructions reminding enumerators to be careful and not to be direct in handing this sensitive issue should be included in the manual.

k) Since some households get their water supply from more than one source the item on water source should be reworded as "where does the household get its water supply most of the time?"

Similarly the next item should be changed from "Does the household use protected water?" to "Does the household use protected water most of the time?"

1) There should be clear instructions in the manual that enumerators should ask the question "Do household members spend nights in the same room with domestic animals?" directly and should never be preceded by such questions as "does the household own or have livestock?" which were observed to make respondents suspicious.

CENTRAL STATISTICAL OFFICE

NATIONAL INTEGRATED HOUSEHOLD SURVEY PROGRAM — RURAL HEALTH SURVEY — PRETEST QUESTIONNAIRE

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APPENDIX 2

QUESTIONNAIRE ID · (1 2 3)

SECTION 1 — IDENTIFICATION PARTICULARS

1— REGION (4 5)	2— AWRAJA (6 7)	3— WEREDA (8 9)	4— FARMERS ASSOCIATION (10 11 12)	5— SERIAL NUMBER OF SELECTED HOUSEHOLD (13 14 15 16)	6— ORDER OF SELECTION (17 18)	7— ROUND (19)	8— MONTH & YEAR (20 21 22 23)

SECTION 2 — POPULATION AND HEALTH PARTICULARS

9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
SERIAL NUMBER	NAMES OF USUAL MEMBERS OF HOUSEHOLD	RELATIONSHIP TO THE HEAD OF HOUSEHOLD	SEX 1= MALE 2= FEMALE	AGE	ILLNESS DURING THE LAST 14 DAYS: WERE YOU ILL? 1= YES 2= NO	LIST OF ILLNESSES	DURATION OF ILLNESS DURING THIS PERIOD ?	DAYS LOST FROM USUAL ACTIVITY DUE TO ILLNESS DURING THIS PERIOD	INJURY DURING THE LAST 14 DAYS: WERE YOU INJURED ? 1=YES 2= NO	DURATION OF INJURY DURING THIS PERIOD ?	DAYS LOST FROM USUAL ACTIVITY DUE TO INJURY DURING THIS PERIOD	EXTERNAL CAUSE OF INJURY	When you were ill or injured during the last 14 days, did you get any assistance from any of the following? 1= YES 2= NO	NUMBER OF VISITS: HEALTH INSTITUTION	COMMUNITY HEALTH AGENT	PHARMACY	THADITIONAL HEALER	LAY TREATMENT	SELF TREATMENT	OTHER	IF NO TO COULMNS 22 & 24 GIVE MAIN REASONS	WHERE DO YOU USUALLY DEFECATE ?	WHO HELPED YOU IN THE DELIVERY OF YOUR LAST BABY ? (FOR WOMEN AGED 10 YEARS AND ABOVE WHO HAD AT LEAST ONE BIRTH)
24 25			26	27	28	29	30	31 32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
0 1																												
0 2																												
0 3																												
0 4																												
0 5																												
0 6																												
0 7																												
0 8																												

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33 WHERE DOES THE HOUSEHOLD GET ITS WATER SUPPLY? (1 2)
1= WELL ☐ 2= SPRING ☐ 3= RIVER ☐
4= PIPE ☐ 5= LAKE ☐ 6= OTHER ☐

34 DOES THE HOUSEHOLD USE PROTECTED WATER ? (1 2)
1=YES ☐ 2=NO ☐

35 DOES THE HOUSEHOLD HAVE REFUSE DISPOSAL ? (1 2)
1=YES ☐ 2=NO ☐

36 DOES THE HOUSEHOLD HAVE A PIT FOR DEFECATION (1 2)
1=YES ☐ 2=NO ☐

37 DO DOMESTIC ANIMALS STAY DURING NIGHTS IN THE SAME HOUSING UNIT WITH MEMBERS OF HOUSEHOLD? (1 2)
1=YES ☐ 2=NO ☐

01= ACCIDENTAL FALLS
02= ACCIDENTAL FALLS (FROM DRAUGHT ANIMALS)
03= ACCIDENTAL ATTACKS OR KICKS BY ANIMALS
04= ACCIDENTAL BURNS
05= ACCIDENTS CAUSED BY FIRE ARMS
06= ACCIDENTAL POISONING
07= CAR AND OTHER VEHICLE ACCIDENTS
08= INJURY PURPOSELY INFLICTED BY OTHERS
09= BITES AND STINGS
10= ATTEMPTED SUICIDE
11= ALL OTHER CAUSES OF ACCIDENT

1= TOO FAR DISTANT
2= TOO EXPENSIVE
3= USED TRADITIONAL MEDICINE
4= DID NOT BELIEVE IT WOULD HELP
5= OTHER

1= ANY WHERE FAR FROM HOUSES
2= AT THE BACKYARD
3= IN THE LATRINE
4= OTHER

1= HOSPITAL / HEALTH-CENTER / HEALTH STATION
2= HEALTH-AGENT
3= TRADITIONAL MID-WIFE
4= LAY PERSON
5= NONE

ENUMERATOR'S NAME	SIGNATURE	DATE	SUPERVISOR'S NAME	SIGNATURE	DATE	REGIONAL STATISTISTICAL HEAD'S NAME	SIGNATURE	DATE
		/ /			/ /			/ /

Appendix 3 - List of Symptoms and Specific Diagnosis to be Identified in the Health Survey Pretest

A. For persons aged 5 years and above:-

1. Fever:-

01 - Malaria: intermittent high fever with chills, prostration.

02 - Meningitis: fever with neck rigidity, vomiting and skin rash.

03 - Infectious Jaundice: fever with nausea and yellow eyes, discoloured stool, joint pains, vomiting, loss of appetite.

04 - Other Fever: other types of fever not mentioned above.

2. Cough:-

05 - Tuberculosis: chronic cough (3 months or more) with thick sputum (may contain blood) and loss of weight, sometimes slight fever and night sweating.

06 - Pneumonia: acute cough (less than 3 months) with fever, chest pain and shortness of breath, sputum.

07 - Other Cough: other types of cough not mentioned above.

3. Diarrhoea:-

08 - Infectious Diarrhoea: diarrhoea, abdominal pain, fever.

09 - Bacillary Dysentery: diarrhoea and vomiting, fever, mucus like stools.

10 - Other Diarrhoea: other types of diarrhoea not mentioned above.

4. Other Symptoms of Health Problem:-

11 - Ear Problem

12 - Eye Problem

13 - Teeth and Gum Problem

14 - Skin Infections: wounds on skin not caused by injuries due to accidents, for example scabies, eczema, ... etc.

15 - Leprosy Disease

16 - Venereal Disease: for example gonorrhea, syphilis, ... etc.

17 - Worms in the Stool: such as ascaris, tapeworm (that can be seen by the sick person).

18 - Tetanus: locked jaw with muscular spasms, history of open wound or recently deliverd women (less than a month).

19 - Goitre: externally visible swelling on the fore side (surface) of the neck.

20 - Elephantiasis: chronic large swelling on one foot, both feet or testicles.

21 - Other Health Problems: other symptoms of health problem not mentioned above (excluding types of fever, cough and diarrhoea).

5. Maternal Health Problems:-

22 - Complicated Pregnancy: pregnancy with complications of health (for example blood from womb or genital tract, swelling of legs, fever, weakness, pallor, ... etc.).

23 - Abortion: miscarriage in less than seven months of pregnancy.

24 - Complicated Child-birth: complications of health during childbirth, for example excessive bleeding during delivery, long and exhaustive labour,.... etc.

25 - Complicated Puerperium: complication of health during puerperium, for example fever, ... etc.

B. Health Problems in Children Under 5 Years Age

26 - Malnutrition: loss of weight with weakness of body, oedema, pallor due to anaemia.

27 - Measles: fever with skin rash that disappears after a few days.

28 - Tuberculosis: chronic cough with loss of weight, slight fever.

29 - Whooping Cough: paroxysmal cough with fever and a whoop.

30 - Pneumonia: acute cough with fever and moan, shortness of breath.

31 - Gastro Enteritis: diarrhoea, more than 3 times daily, with vomiting.

32 - Diarrhoea containing Blood:

33 - Tetanus: locked jaw, muscular spasms, history of open wound or recently born child (less than a month).

34 - Eye Problem

35 - Ear Problem

36 - Throat Problem: difficulty in food swallowing with fever and throat problem.

37 - Other Child Health Problems: other symptoms in children health problem not mentioned above.

APPENDIX 4

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CENTRAL STATISTICAL OFFICE

NATIONAL INTEGRATED HOUSEHOLD SURVEY PROGRAM – RURAL HEALTH

SURVEY – FINAL QUESTIONNAIRE – 1982/83

SECTION I – IDENTIFICATION PARTICULARS

JOB I.D.	1	2	3
	2	0	4

1. REGION	2. AWRAJA	3. WEREDA
4 5	6 7	8 9

4. FARMERS ASSOCIATION	5. SERIAL NUMBER OF SELECTED HOUSEHOLD	6. ORDER OF SELECTION
10 11 12	13 14 15 16	17 18

7. HOUSEHOLD – GROUP	8. ROUND	9. MONTH & YEAR
19	20	21 22 23 24

	NAME	SIGNATURE	DATE
ENUMERATOR			/ /
SUPERVISOR			/ /
REGIONAL STATISTICAL HEAD			/ /

RURAL HEALTH SURVEY - FINAL QUESTIONNAIRE FOR ROUND I - 1982 (CONTINUED)

SECTION 2 — POPULATION AND HEALTH PARTICULARS

APPENDIX 4

10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
SERIAL NUMBER	NAMES OF USUAL MEMBERS OF HOUSEHOLD	RELATIONSHIP TO THE HEAD OF HOUSEHOLD	SEX 1= MALE 2= FEMALE	AGE	ILLNESS DURING THE LAST 14 DAYS: WERE YOU ILL? 1= YES 2= NO	IF "YES" TO COLUMN 15 WHAT WAS / WERE THE ILLNESS(ES)? ILLNESS I	ILLNESS II	DURATION OF ILLNESS	DAYS LOST FROM USUAL ACTIVITY DUE TO ILLNESS	INJURY DURING THE LAST 14 DAYS: WERE YOU INJURED? 1= YES 2= NO	DURATION OF INJURY	DAYS LOST FROM USUAL ACTIVITY DUE TO INJURY	EXTERNAL CAUSE OF INJURY	WHEN YOU WERE ILL (INJURED) DURING THE LAST 14 DAYS DID YOU GET ANY TREATMENT FROM ANY OF THE FOLLOWING? 1= YES 2= NO	IF "YES" TO COLUMN 24 NUMBER OF VISITS: HEALTH INSTITUTION	COMMUNITY HEALTH AGENT	PHARMACY	TRADITIONAL HEALER	LAY TREATMENT	SELF TREATMENT	OTHER	IF "NO" TO COLUMNS 25 & 26 GIVE MAIN REASONS	WHERE DO YOU USUALLY DEFECATE?	FOR WOMEN AGED 10 YEARS AND ABOVE ONLY: DID YOU GIVE BIRTH IN THE LAST 2 YEARS? 1= YES 2= NO	IF "YES" TO COLUMN 34 WHO HELPED YOU IN DELIVERING THE BABY
25 26			27	28 29 30	31			32 33		34 35	36 37 38 39	40	41 42	43 44 45 46	47	48	49	50	51	52	53	54	55	56	57	58
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0 5																									
0 6																									
0 7																									
0 8																									
0 9																									
1 0																									

36 (59) WHERE DOES THE HOUSEHOLD USUALLY GET ITS WATER SUPPLY?
1- WELL ☐ 2- SPRING ☐ 3- RIVER ☐
4- PIPE ☐ 5- LAKE ☐ 6- OTHER ☐

37 (60) DOES THE HOUSEHOLD USUALLY USE PROTECTED WATER?
1- YES ☐ 2- NO ☐

38 (61) DOES THE HOUSEHOLD HAVE REFUSE DISPOSAL ?
1- YES ☐ 2- NO ☐

39 (62) DOES THE HOUSEHOLD HAVE LATRINE ?
1- YES ☐ 2- NO ☐

40 (63) DO DOMESTIC ANIMALS STAY DURING NIGHTS IN THE SAME HOUSING UNIT WITH MEMBERS OF HOUSEHOLD?
1- YES ☐ 2- NO ☐

01= ACCIDENTAL FALLS
02= ACCIDENTAL FALLING FROM DRAUGHT ANIMALS OR KICKS/ATTACKS FROM OTHER ANIMALS
03= ACCIDENTAL BURNS
04= ACCIDENTS CAUSED BY FIRE ARMS
05= ACCIDENTAL POISONING
06= CAR AND OTHER VEHICLE ACCIDENTS
07= INJURY PURPOSELY INFLICTED BY OTHERS
08= BITES AND STINGS
09= ATTEMPTED SUICIDE
10= ALL OTHER CAUSES OF ACCIDENT

1= TOO FAR DISTANCE
2= TOO EXPENSIVE
3= USED TRADITIONAL MEDICINE
4= DID NOT BELIEVE IT WOULD HELP
5= THOUGHT IT TO BE SELF LIMITING
6= WAITING TIME IS TOO LONG
7= THOUGHT THAT I COULD NOT GET THE MEDICINE REQUIRED
8= OTHER

1= ANY WHERE FAR FROM HOUSES
2= AT THE BACKYARD
3= IN THE LATRINE
4= OTHER

1= MEDICAL PERSONNEL
2= HEALTH AGENT
3= TRADITIONAL MID-WIFE
4= LAY PERSON
5= NONE

SECTION 2— POPULATION AND HEALTH PARTICULARS— FINAL RURAL HEALTH QUESTIONNAIRE FOR ROUND 2-1983 (CONTINUED)

10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26 27 28 29 30 31	32	33	34	35	41	42	43 44 45
SERIAL NUMBER	NAMES OF USUAL MEMBERS OF HOUSEHOLD	RELATIONSHIP TO THE HEAD OF HOUSE HOLD	SEX 1= MALE 2= FEMALE	AGE LAST BIRTH DAY	ILLNESS DURING THE LAST 14 DAYS: WERE YOU ILL? 1= YES 2= NO	IF "YES" TO COLUMN 15 WHAT WAS / WERE THE ILLNESS (ES)? ILLNESS I	ILLNESS II	DURATION OF ILLNESS	DAYS LOST FROM USUAL ACTIVITY DUE TO ILLNESS	INJURY DURING THE LAST 14 DAYS: WERE YOU INJURED? 1= YES 2= NO	DURATION OF INJURY	DAYS LOST FROM USUAL ACTIVITY DUE TO INJURY	EXTERNAL CAUSE OF INJURY	WHEN YOU WERE ILL / INJURED / DURING THE LAST 14 DAYS DID YOU GET ANY TREATMENT FROM ANY OF THE FOLLOWING? 1= YES 2= NO	IF "YES" TO COLUMN 24 NUMBER OF VISITS: HEALTH INSTITUTION; Community Health Agent; PHARMACY; Traditional Healer; Lay Treatment; Self Treatment; OTHER	IF "NO" TO COLUMNS 25 & 26 GIVE MAIN REASONS	WHERE DO USUALLY DEFECATE?	FOR WOMEN AGED 10 YEARS AND ABOVE ONLY: DID YOU GIVE BIRTH IN THE LAST 2 YEARS? 1= YES 2= NO	IF "YES" TO COLUMN 34 WHO HELPED YOU IN DELIVERING THE BABY?	RELIGION	ETHNIC GROUP	FOR THOSE AGED 10 YEAR AND ABOVE: MARITAL STATUS; ARE YOU LITERATE? 1= YES 2= NO; IF LITERATE HIGHEST GRADE COMPLETED
25 26			27	28	29 30	31	32 33	34 35	36 37	38 39	40	41 42	43	44 45	46 47	48	49 50 51 52 53 54	55	56	57	58	64	65 66 67	68 69 70
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36 [59] WHERE DOES THE HOUSEHOLD USUALLY GET ITS WATER SUPPLY?
1- WELL ☐ 2- SPRING ☐ 3- RIVER ☐
4- PIPE ☐ 5- LAKE ☐ 6- OTHER ☐

37 [60] DOES THE HOUSE HOLD USUALLY USE PROTECTED WATER?
1- YES ☐ 2- NO ☐

38 [61] DOES THE HOUSEHOLD HAVE REFUSE DISPOSAL?
1- YES ☐ 2- NO ☐

39 [62] DOES THE HOUSEHOLD HAVE LATRINE?
1- YES ☐ 2- NO ☐

40 [63] DO DOMESTIC ANIMALS STAY DURING NIGHTS IN THE SAME HOUSING UNIT WITH MEMBERS OF HOUSEHOLD?
1- YES ☐ 2- NO ☐

01= ACCIDENTAL FALLS
02= ACCIDENTAL FALLING FROM DRAUGHT ANIMALS OR KICKS/ATTACKS FROM OTHER ANIMALS
03= ACCIDENTAL BURNS
04= ACCIDENTS CAUSED BY FIRE ARMS
05= ACCIDENTAL POISONING
06= CAR AND OTHER VEHICLE ACCIDENTS
07= INJURY PURPOSELY INFLICTED BY OTHERS
08= BITES AND STINGS
09= ATTEMPTED SUICIDE
10= ALL OTHER CAUSES OF ACCIDENT

1= TOO FAR DISTANCE
2= TOO EXPENSIVE
3= USED TRADITIONAL MEDICINE
4= DID NOT BELIVE IT WOULD HELP
5= THOUGHT IT TO BE SELF LIMITING
6 WAITING TIME IS TOO LONG
7= THOUGHT THAT I COULD NOT GET THE MEDICINE REQUIRED
8= OTHER

1= ANY WHERE FAR FROM HOUSES
2= AT THE BACKYARD
3= IN THE LATRINE
4= OTHER

1= MEDICAL PERSONNEL
2= HEALTH AGENT
3= TRADITIONAL MID-WIFE
4= LAY PERSON
5= NONE

1= ORTHODOX
2= OTHER CHRISTIAN
3= ISLAM
4= OTHER (INICLUDING THOSE WHO HAVE NO RECOGNIZED RELIGION)

1= SINGLE
2= MARRIED
3= WIDOWED
4= DIVORCED

Appendix 5 - Final list of Symptoms and Specific Diagnosis to be Identified in the Health Survey

1. Fever

1.1 - Intermittent high fever with chills, prostration _____ "Malaria"

1.2 - Fever with skin rash that disappears after a few days _____ "Measles"

1.3 - Fever with nausea and yellow eyes, discoloured stool, joint pains, vomiting, loss of appetite _____ "Infectious Jaundice"

1.4 - Fever with neck rigidity, vomiting and skin rash _____ "Meningitis"

1.5 - Fever with severe headache, sometimes loss of consciousness, prostration (usually in the form of an epidemic) _____ "Typhus or Relapsing Fever"

1.6 - Other conditions of fever not mentioned above, e.g. chicken pox, ... etc._____ "Other Fever"

2. Cough

2.1 - Chronic cough (3 months or more) with thick sputum (may contain blood) and loss of weight, sometimes slight fever and night sweating_____ "Tuberculosis"

2.2 - Acute cough (less than 3 months) with fever, chest pain and shortness of breath, sputum____ "Pneumonia"

2.3 - Paroxysmal cough with fever and a whoop usually common among children aged under 5 years__ "Whooping cough"

2.4 - Other conditions of coughing not mentioned above, such as common cold, shortness of breath, asthma, Chest pain,...etc._____"Other cough"

3. Diarrhoea and Abdominal conditions

3.1 - Frequent liquid stool, may contain blood and sometimes mucus _____ "Diarrhoea"

3.2 - Diarrhoea, more than 3 times daily, with vomiting, in children aged less than 5 years__ "Gastro Enteritis"

3.3 - Worms, such as ascaris, tape worm,...etc. in the abdomen _____ "Worms in the Stool"

3.4 - Other diarrhoea and abdominal conditions, for example stomach trouble, abdominal distention, ..etc. _____ "Other Diarrhoea and Abdominal Condition"

4. Conditions on neck and head

4.1 - Painfree swelling externally visible on the fore side (surface) of the neck, that moves up and down when swallowing saliva, water, food___"Goitre"

4.2 - Ear problem, sometimes may have pus (excluding chronic difficulties of hearing)___"Ear Problem"

4.3 - Eye problem, may have eye discharge (excluding blindness of one or both eyes)_____ "Eye Problem"

4.4 - Throat problem in young children - sometimes painful swelling, externally visible on the upper part of the throat, difficulty in swallowing, vomiting, fever_____ "Throat Problem"

4.5 - Teeth and gum problem _____ "Teeth and Gum Problem"

4.6 - Other neck and head problems, for example headache, nose bleeding, mumps ...etc. __"Other Neck and Head Conditions"

5. Venereal Diseases

5.1 - Male and female diseases that come as a result of sexual intercourse, for example gonorrhea, syphilis, wound or swelling on or around genital, ... etc. _____ "Venereal Disease"

6. Conditions on the skin (or skin problems)

6.1 - Wounds on the skin not caused by injuries due to accidents, for example scabies, eczema, wound, ... etc. _____ "Wound on Skin"

6.2 - Leprosy _____ "Leprosy"

6.3 - Chronic large swelling on one foot, both feet or testicle (s) _____ "Elephantiasis"

6.4 - Other conditions and symptoms on the skin, for example vitiligo, anthrax..... etc. "Other Skin Problems"

7. Maternal Health Problems

7.1 - Pregnancy with complications of health (for example blood from womb through genital tract, swelling of foot/feet, fever, weakness, pallor, ... etc) _____ "Complicated Pregnancy"

7.2 - Miscarriage in less than seven months of pregnancy _____ "Abortion"

7.3 - Complications of health during child birth, for example excessive bleeding during child delivery, long and exhaustive labour "Complicated Child Birth"

7.4 - Complication of health during puerperium, for example fever, ...etc. _____ "Complicated Puerperium"

7.5 - Menstruation and other maternal problems _____ "Menstruation and other maternal Problems"

8. Other Conditions not Mentioned Above

8.1 - Loss of weight with weakness of body, oedema, pallor, discoloured hair specially relevant to children _____ "Malnutrition"

8.2 - Locked jaw with mascular spasms, history of open wound or recently born child (less than a month) or recently deliverd women (less than a month) _____ "Tetanus"

8.3 - Mental disturbance, for example madness _____ "Mental Disturbance"

8.4 - Other conditions not mentioned above, for example general fatigue, heart failure, rheumatic pain, kidney problem, hypertension, hypotension, diabetes, ... etc. _____ "Other condition(s) not Mentioned Above"