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Republic of Ethiopia
Ministry of Health

ETHIOPIAN HEALTH ACCOUNTS

HOUSEHOLD HEALTH SERVICE UTILIZATION AND EXPENDITURE SURVEY

2015/16

August 2017, Addis Ababa



Federal Democratic Republic of Ethiopia
Ministry of Health

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August 2017

Additional information about the 2015/2016 Ethiopian Health Accounts Household Health Service Utilization and Expenditure Survey may be obtained from the Federal Democratic Republic of Ethiopia Ministry of Health, Resource Mobilization Directorate Lideta Sub City, Addis Ababa Ethiopia. P.O.Box:1234, Telephone: +251115517011/535157; Fax: +251115527033; Email:

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Foreword

Generating evidence on household's health service utilization and expenditure is an essential part of the Health Accounts (HA). This 6th round Household Utilization and Expenditure Survey estimates households' utilization of health services and Out-of-Pocket (OOP) payments for health services. The report utilizes the new System of Health Accounts (SHA 2011), which provides an extended classification of health service utilization and expenditure. This enables policymakers and stakeholders to have more detailed information based on health utilization and expenditure among households in Ethiopia. This household survey also attempts to estimate community contributions that are made towards health system development in the form of financial or in-kind contributions.

This report documents the existence of significant inter- and intra-regional as well as income or wealth-related variations in utilization of outpatient and inpatient services. Non-communicable diseases (NCDs) have become a significant reason for people to seek health care services. Government health facilities remain not only the major providers of care but also the main outlets through which the very poor households access care. Out-of-pocket spending is high and likely to be one of the barriers to health service utilization. The findings of this report highlight that greater focus is needed on ensuring equity, improving quality of public health facilities, and expanding financial protection measures in order to achieve Universal Health Coverage (UHC).

The use of the evidence presented in this report, and further analyses of the rich data set from the household utilization and expenditure survey will be vital to inform health system strengthening approaches that seek to improve uptake rates of service utilization, financial protection measures, and quality and responsiveness of health care.

Finally, I would like to take this opportunity to encourage directorates and teams in MoH, the Regional Health Bureaus (RHB), other health sector agencies and the wider stakeholder community to use the evidence in this edition in their planning and policy decision processes.



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Acronyms

| | | | |
|----------|--|------|----------------------------------|
| BIC | Breakthrough International Consultancy | SHA | System of Health Accounts |
| BG | Benishangul-Gumuz | SQRT | Square Root |
| BMGF | Bill & Melinda Gates Foundation | TB | Tuberculosis |
| CAPI | Common Application Programmer's Interface | TBA | Traditional Birth Attendant |
| CBHI | Community Based Health Insurance | THE | Total Health Expenditure |
| CSA | Central Statistical Agency | TLU | Tropical Livestock Units |
| DHS | Demographic and Health Survey | TWG | Technical Working Group |
| EAs | Enumeration Areas | UHC | Universal Health Coverage |
| EFY | Ethiopian Fiscal Year | USD | United States Dollar |
| EPHI | Ethiopian Public Health Institute | VCT | Voluntary Counseling and Testing |
| ETB | Ethiopian Birr | WG | Working Group |
| FDRE MOH | Federal Democratic Republic of Ethiopia Ministry of Health | | |
| GDP | Gross Domestic Product | | |
| HA/NHA | Health Accounts/National Health Account | | |
| HC | Health Center | | |
| HEP | Health Extension Program | | |
| HEW | Health Extension Worker | | |
| HDA | Health Development Army | | |
| HH | Household | | |
| HICE | Household Income, Consumption and Expenditure | | |
| HSTP | Health Sector Transformation Plan | | |
| IRS | Indoor Residual Spray | | |
| IPD | Inpatient Department | | |
| KM | Kilometers | | |
| KMO | Kaiser-Meyer-Olkin | | |
| LLTIN | Long-lasting Treated Insecticide Net | | |
| NCD | Non-Communicable Disease | | |
| NGO | Non-governmental Organization | | |
| ODF | Open-Defecation Free | | |
| OOP | Out-of-Pocket | | |
| OPD | Outpatient Department | | |
| PHC | Primary Healthcare | | |
| PCA | Principal Component Analysis | | |
| SERC | Scientific and Ethical Review Committee | | |

Executive Summary

This report summarizes the results of Ethiopia's sixth Health Accounts (HA VI) Household Health Expenditure and Service Utilization Survey conducted mid-2016. The survey explored health-seeking behavior, use of healthcare services, out-of-pocket health spending, community contribution to health systems strengthening, and health insurance coverage of households (HHs). This chapter summarizes survey methodology, key findings, and their policy implications.

Survey Methodology

The specific objectives the HA VI HH survey were: to generate evidence and track household health care utilization and spending on different levels and types of health care services and commodities, as well as to estimate community contributions (investment of money, time and other inputs) on strengthening the health system. The HA VI HH survey sampling used the Central Statistical Agency's (CSA) 2007 population census sampling frame, with three-stage stratification of woredas, enumeration areas (EAs) and HHs. Of the total 86,805 EAs available in the country, this survey randomly selected 400 EAs from 101 woredas (4 EAs per woreda). In each EA, twenty-five HHs were selected systematically from a fresh list of households in each EA sampled for study. The EAs were selected and provided to the survey team by CSA.

Key Findings

Health Service Utilization

Of the total sample, 10% of individuals reported being ill in the 4 weeks preceding the survey, which was higher among females (10.8%) than males (9.3%), and in urban settings (11.1%) than in rural areas (9.9%). About 53% of individuals who reported being ill reported visiting a health facility to seek care, a lower figure than what was reported by NHA5 survey (62.4%), which could be due seasonal differences between the two surveys. Of those seeking care, half of those individuals mentioned infectious or communicable disease as the reason for seeking care, mainly due to malaria (11.1%), pneumonia (9.3%) and diarrhea (8.7%). Non-communicable diseases (NCDs) were cited as a reason for seeking care by 10% of individuals who sought care. There was significant variation among regions in seeking care for an illness: the lowest rate was observed in Amhara, where 39% of those reporting illness had sought care, and the highest rate was in Harari, where 79.5% of those reporting illnesses had sought care. A relatively low level of care seeking was reported by the previous NHA as well as at least one other study. Individuals in the lowest wealth quintile were slightly more likely to report experiencing illness, but they were less likely to report having sought care. The survey documented a clear positive association between economic status and healthcare seeking behavior, as well as a positive association between age and reported incidence of illness, for both males and females. Eleven percent of respondents reported having at least one chronic condition, such as cancer, diabetes, kidney diseases or a mental disorder.

Government healthcare facilities provided the majority of outpatient services (75% of outpatient services nationally, 77% in rural areas, and 63% in urban areas); and for individuals living in the poorest quintile households (80%). Government facilities accounted for a lower percentage of outpatient services provided to the richest quintile households (62%). Proximity of a health facility to a patients home was the main reason for people choosing the outpatient healthcare provider they visited (50%), followed by availability of medicines (8.5%), good counseling by health workers (7.3%), short waiting time (5.5%), qualification of staff (5.3%), and whether the facility accepted patients in the waiver system (5.4%). The majority (73.4%) of outpatient visits were made to the nearest facility, while the remaining outpatient visitors bypassed the nearest facility. The main reason for bypassing was the perception that quality of care at the nearest health facilities was too low - 50% of individuals who bypassed nearest facilities cited either lack of drugs or qualified staff as the reason for bypassing. About 88% of outpatient visitors reported that they were satisfied with the health services they received from the health facilities they visited. The highest rate of

satisfaction (92%) was reported for the 'time spent with the clinician' while the lowest rate of satisfaction (78%) was cited for 'availability of diagnostic facility'. About 93% of outpatient visitors reported that they had completed their prescribed treatments.

The inpatient admission rate was estimated to be 1.1% of the population in the 12 months preceding the survey, which was higher among females (1.2%) than males (1.0%), for individuals living in urban (1.7%) than those living in rural areas (1.0%), and for patients from the richest households (1.7%) than those living in the poorest households (1.0%). The common causes for inpatient admission were reported to be diseases of the respiratory tract, including pneumonia (8.7%), followed by malaria (6.1%), intestinal infections (5.7%) and diarrhea (5.5%). Non-communicable diseases and mental illnesses accounted for 13.9% of all causes of inpatient admissions.

Government healthcare facilities (government hospitals and health centers) accounted for 80.1% of the total inpatient services, while private health facilities provided 18% of inpatient services, and non-governmental organization NGO health facilities were responsible for the remaining 2%. Individuals living in the richest households were about four times more likely to use private hospitals and about five times less likely to use government health centers or NGO hospitals compared with their counterparts living in the poorest households. Individuals living in rural areas predominantly use the government hospitals, followed by government health centers and private clinics. The main reasons reported for choosing the inpatient health service providers visited were proximity of the facility to one's home (25.7%), availability of medicines (15.3%), provision of exempted services (11.1%), presence of qualified staff (9.8%), and less waiting time (9.1%). However, of those who used inpatient services, 46.3% bypassed the nearest health facility to their homes to seek health care at another health facility. The main reasons for bypassing the closest inpatient facility was unavailability of medicines (29.0%), lack of bed (19.1%) and lack of qualified staff (18.9%). Of the individuals admitted to inpatient health facilities, 88.3% reported that they were satisfied with the inpatient health services received. Overall, each aspect of inpatient care was rated as 'good' or 'very good' by at least 80% of inpatient service users, with the exception of 'food quality', which was rated as 'good' or 'very good' by about 70% of inpatient users.

Healthcare Expenditure

The estimated HH contribution to health spending was about 21.7 billion Ethiopian birr (ETB) – of which 18.2 billion ETB was in the form of out-of-pocket (OOP) payments, 2.87 billion ETB was in the form of community contribution to health system strengthening (HDA and malaria control activities), and another 620 million ETB was for premium contributions to insurance. Of the total OOP payments on health, 17.5 billion ETB was for outpatient services, and the remaining 711.6 million ETB was for the inpatient services. The total per capita out of pocket spending for health was estimated to be 231 ETB, of which 222 ETB (96%) was for outpatient services, while 9 ETB was for inpatient services. The estimated total OOP spending has increased by 78% compared with the HA V household survey (2010/11). There is significant variation among regions in the per capita outpatient and inpatient OOP expenditures. Oromia and Addis Ababa spent significantly higher than the national average, with 482 ETB and 460 ETB per capita OOP respectively. The average per capita OOP is higher for urban areas (355 ETB) compared to the rural areas (200 ETB). An analysis of OOP spending by expenditure quintiles show that average per capita OOPs increase as one goes from lower to higher income quintiles (Q1 162.5 ETB, Q2 227.7 ETB, Q3 236.3 ETB, Q4 161 ETB and Q5 372.7 ETB), with the exception of the second richest quintile (Q4).

In terms of type of expenditures, 70% of the total OOP was spent on direct health services (drugs, diagnostics), while 23% was for other health-related service costs such as transportation and bed/accommodation and food; the remaining 7% were not specified. Of the direct health service payments, 45% of the total OOP were incurred for drugs and medical supplies followed by diagnostics and investigation (16%) and consultation costs (9%). Treatment for infections and parasitic diseases accounted for 36% of total OOP expenditure, followed by treatment of non-communicable diseases, which accounted for 23% of total OOP expenditure. Preventive and promotive services accounted for only 7% of the total HH OOP spending, while injuries and nutrition supplements took a share of 3% and 1% of HH OOP respectively. Households were not able to classify 30% of their OOP spending into specific services. The survey documented that about 55% of the total OOP health spending was financed through individuals or families own cash

on-hand, while 35% of OOP came from assistance from friends/family members; 6% from selling livestock and/or cereals and another 4% from borrowing from friends and the community.

Community Contribution to Health Systems Strengthening

The success of the Ethiopian health system in meeting some of the global health goals and targets has been explained by the strategy of ensuring that communities produce their own health through the health extension program (HEP) and the associated health development army (HDA). Community members contribute time and labor to strengthen the implementation of the different health extension packages. Overall, 90% of households in the survey had at least one member of the household participating in HDA. About 39% of households were involved in Long-Lasting Treated Insecticide Nets (LLTIN) distribution, Indoor Residual Spray (IRS) operations, pond drainage and/or awareness creation about controlling malaria epidemics.

Community contribution to health was estimated by converting labor and/or other in-kind contributions into cash using the local input prices. Total community contribution to health system strengthening was estimated at 2.87¹ billion ETB for 2015/16, about 36 ETB per capita. Of this, about 55%, or 19.86 ETB per capita was contributed through the health development army (HDA) and the remaining 45% was contributed through the malaria control program. Communities also contributed an estimated 75 million ETB in the form of in-kind contribution of culturally acceptable food to encourage institutional delivery. When the different components of the HDA are explored, regular meetings among HDA members account for about 40% of the HDAs contribution; followed by environmental management activities (excluding malaria), which accounts for 27% of their contribution. Community contribution in promoting institutional and safe delivery in the form of mothers' conferences and in-kind cereal contribution accounted for about 23% of the total community contributions. Analysis of how community members spend their time on malaria control activities showed that pond drainage accounted for about 41% of time spent, while awareness creation and distribution of LLTIN took 31% and 20% of the time/money spent, respectively.

Health Insurance Coverage

This survey documented that 7.4% of the country's population was covered by health insurance in 2015/16. Community based health insurance (CBHI) was the dominant type of health insurance, constituting 96% of the total health insurance coverage. Farmers constituted 86% of the total households insured. The poorest quintile (Q1) and richest quintile (Q5) households have a smaller share of the total population insured, while Q2, Q3 and Q4 wealth quintiles have either proportional or higher shares of the total population insured. The low insurance coverage among the lowest quintile may be attributed to lack of income to pay for insurance premium (membership contribution), and inadequate government's support for the indigent, while people in the richest quintile may not be buying coverage as they may be able to pay out-of-pocket, or may seek care from private providers that are not included in the CBHI scheme. Most of the insured population (69%) reported that their insurance covered both outpatient and inpatient health services. On the other hand, about 10% of members reported perceived that their insurance covered only outpatient services, while 1.3% thought their insurance covered only inpatient services. The remaining 18% of insured households didn't know the types of health services covered by their insurance, which indicates the need to strengthen communication efforts to increase awareness of insurance coverage.

The average household contribution per insured household for insurance was 38.50 ETB per month, and about 86.5% of insured households contribute less than 50 ETB per month. The main source of payment for insurance among the insured was 'household head' (91.6%) followed by 'employer' (4.92%) and 'government' (2.5%), for indigents. About 11.7% of households that have insurance coverage reported having made OOP payments for health services that are not covered in their specific health insurance scheme, while 80% of the insured didn't pay additional OOP payments, implying that these households were financially protected and were not exposed to catastrophic health expenditure. The total health expenditure among the insured population during the year was 723.3 million ETB. Of this, 620 million

¹ The manual labor contribution in HDA in terms of hours per week was collected for each household and the local wage rate was also collected. The time spent on community work and local wage were used to estimate the value of the contribution in terms of money.

ETB (85.8%) was health insurance expenditure for their premium contributions, while the remaining 102 million ETB (14.2%) was spent in the form of OOP. However, the share of health insurance expenditure/premium to total OOP health expenditure was only 3% (i.e. 3% of total OOP was spent on insurance premiums); which indicates the need to increase coverage of health insurance and its share in the total health expenditure through expanding the existing pre-payment schemes.

Policy Implications

1. This survey documented the existence of significant inter- and intra-regional as well as income or wealth-related variations in utilization of outpatient and inpatient services. This reconfirms the importance of prioritizing equity as a transformational agenda. Given the variation in healthcare utilization among and within regions and among wealth quintiles, there is a need to explore in detail the drivers of these variations and chart out context-specific actions.
2. NCDs have become a visible reason for people to seek health care services, even more than reported in the previous survey in 2010/11. It is therefore important to chart out mechanisms of working with the community on how they can protect themselves from this burden by formulating appropriate health promotion and protection interventions. The lessons and best practices of reducing the burden of communicable diseases by the health extension program can be used to chart out how to move forward in this regard.
3. Government health facilities remain not only the major providers of care in Ethiopia (78% of outpatient and 80% of inpatient services), but also the main outlets through which the very poor, by and large, receive health care. Improving and investing in the quality and readiness of these facilities is likely to be a rational investment for reaching the underserved areas and for enhancing equity.
4. The major reason, next to proximity, for choosing/bypassing the nearest health facility for utilization was reported to be availability/lack of medicines and qualified personnel. Exploring the gaps and challenges, and planning for rational investments to reduce medicines stock out rates and fill positions with qualified staff is likely to more evenly distribute care seeking across facilities. This would reduce the existing burden on some hospitals, and reduce the cost of care born by households by reducing travel cost and time, as well as opportunity cost of traveling to facilities that far from their residence.
5. OOP spending is high and could be one of the major barriers to service utilization. The government's strategy to provide insurance for both formal and informal sectors is likely to help Ethiopia move towards universal health coverage (UHC). However, the expansion of insurance schemes needs close follow up, and regular review of its implementation to ensure that the very poor have adequate protection. The findings of this survey indicate that subsidies to the indigent seem inadequate, which needs to be explored further and addressed.
6. Community contribution to health system strengthening in Ethiopia is significant. Given that this is the first attempt to estimate its monetary value, it may be useful to consider introducing a separate/alternative tool and methodology to subsequent HH surveys to clearly document their contribution and to countercheck the estimates provided by this survey.
7. Investment in improving the readiness of facilities should continue to be the top priority of the health system strengthening efforts, as reinforcement of referral systems and reducing bypassing of the closest facilities could reduce the high OOP spending that is incurred by households.
8. Ethiopia has been undertaking such surveys for the last three rounds of the HAs, including this one. This is costly for future HA related activities. Strengthening the routine health finance information system and enabling it to regularly track facility records on OOP spending by public and private facilities would provide more up-to-date data on OOP health spending more frequently. There is a need to prioritize investing on strengthening the routine health finance information system.

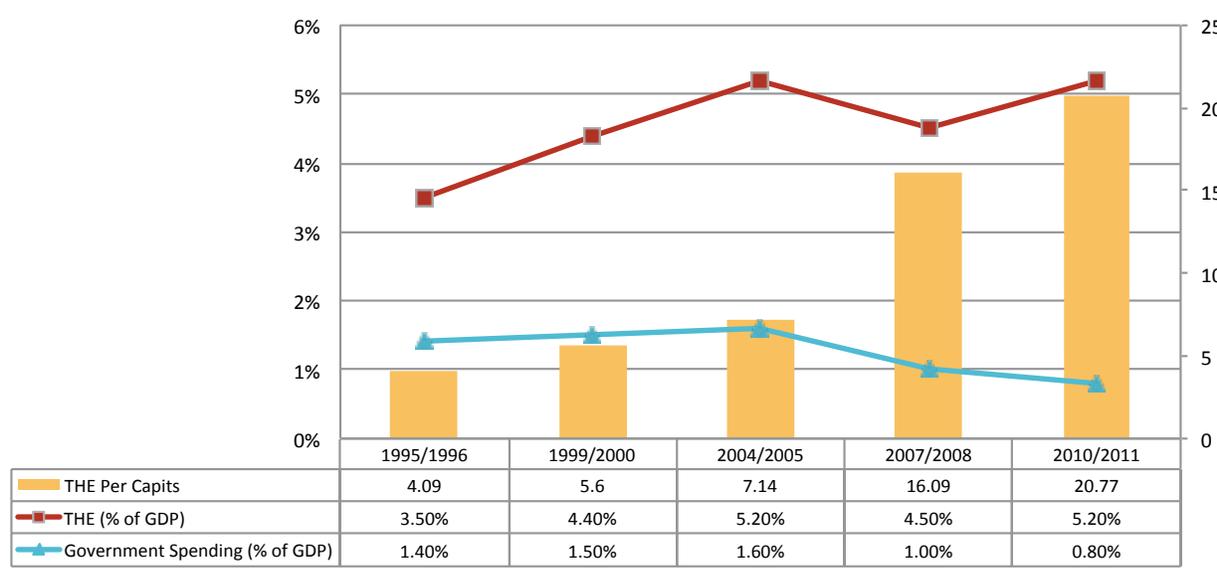
Chapter 1. Introduction and Methodology

1.1 Background

Undertaking Health Accounts (HA) has become a norm in low-income countries. A study of how HA data has been used in 21 low- and middle-income countries gives several examples of good practice on how new data has informed decision-making on how resources are mobilized and managed for the health system, identifying who pays and how much; who provides services, and what resources they use, how health care funds are distributed across the different services, interventions and activities that the health system produces; and who benefits from health care expenditure (De et al., 2003).

Prior to the current HA, the Federal Democratic Republic of Ethiopia Ministry of Health (FDRE MOH) had conducted five HA surveys¹ since 1995/96 to inform its health financing interventions and its health Sector Development and Transformation Plans. The findings of these surveys show that per capita health spending has been rapidly increasing in Ethiopia. Total health expenditure (THE) per capita increased by about 400%, from US\$4.09 in 1995/96 to US\$20.77 in 2010/11 at current prices. THE as a percentage of gross domestic product (GDP) however increased only from 3.5% in 1995/96 to 5% in 2004/2005, and remained at 5% in 2010/11 (see Figure 1.1).

Figure 1.1 Total Health Expenditure (THE) in Ethiopia, 1995/96 to 2010/11



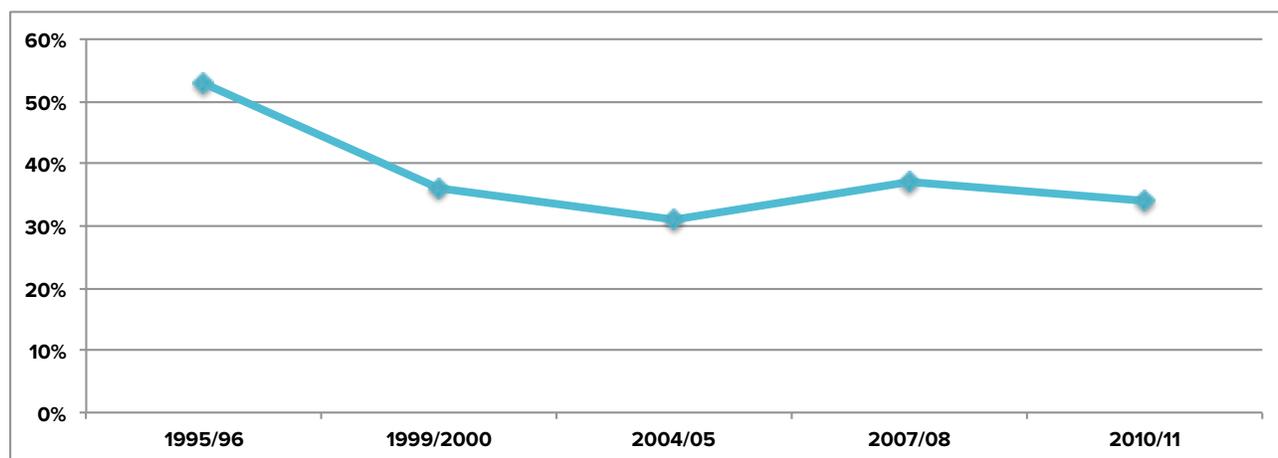
Source: FDRE MOH, NHA study rounds one to five, as documented in health financing review HSPS/BIC 2015 Report

Of this overall health sector spending, out-of-pocket (OOP) payment at the time of seeking care continues to be one of the major sources of financing for health. Direct payment during seeking care is considered as regressive as it inhibits access to health services for the poor. It is also considered to contribute to impoverishment of families due to having to pay for unexpected health care services at the time of illness². In 1995/96, household (HH) OOP health spending accounted for 53% of THE in Ethiopia, which declined, to 34% in 2010/11 (see Figure 1.2).

¹ Five rounds of NHA reports are available, and have informed the health financing policy and strategy making in Ethiopia.

² WHO, 2010, health system financing: a path to universal health coverage, where are we now? Page 5.

Figure 1.2 Trends in OOP Spending as a Share of Total Health Expenditure (%)



Source: FMOH, 1996-2011/12 NHA Studies rounds one to five

Ethiopia started undertaking specific household surveys for its HAs in 2007/08 to estimate OOPs and utilization of health care services. The OOP per capita expenditures during HAs 4 (2007/08) and 5 (2010/11) were \$7.1 and \$ 7.01 per capital³, respectively.

This current sixth HA household survey adopted tools used by the previous two HH surveys but also incorporated additional questions to address emerging issues in the health sector, such as increased focus on nutrition and accounting for community contributions. Its structure was also aligned with the System of Health Accounts (SHA) 2011 classifications. This survey provided more emphasis on measuring equity, a core goal of the Health Sector Transformation Plan (2015/16-2019/20), including factors such as utilization of health services and OOPs on health among different socioeconomic groups.

1.2 Objectives of the Survey

The purpose of this sixth round HA household survey was to provide reliable evidence on the health service utilization and expenditure, including on nutrition, as well as household contribution to health systems strengthening in Ethiopia.

The specific objectives the HA VI HH survey were:

- **Specific Objective 1:** Generate evidence on households spending (both out of pocket and insurance premiums) on health care by level and types of health care services and major diseases as well as by level of income and other equity features;
- **Specific Objective 2:** Assess health service utilization rates by different socioeconomic characteristics of households and regions;
- **Specific Objective 3:** Generate evidence on specific community contributions (investment of time and other inputs to improve their health at the household level) to strengthen health systems.

³ FMOH, 2007/08 and 2011/12, National Health Accounts Reports IV and V Reports

1.3 Survey Methodology

The study used a cross-sectional analysis of 9,986 (99.9% of originally planned 10,000) sample households to estimate household health expenditures and utilization. Twenty-five households were randomly selected from the fresh lists done in each EA. Estimating household expenditure requires clarity on what will be measured and estimated following the well-recognized international estimation procedures^{4,5}. In this survey, the following issues were taken into account when estimating expenditure on health:

- a. **Service and disease categories:** acute illnesses and chronic illnesses, as well as service provisions, were separated and treated differently. The survey questionnaire used the latest internationally accepted SHA 2011 disease classification method.
- b. **Hospitalization (inpatient) vs. outpatient care (OPD):** Inpatient and outpatient services were categorized in different sections of the survey and were estimated separately.
- c. **Recall period:** This survey used an internationally accepted recall period of 4 weeks for outpatient visits, one year for inpatient services, and four week for community contributions for health systems strengthening.
- d. **Types of health expenditure considered:** the health expenditure categories included in this survey can be divided into the following items: registration and consultations, drugs & medicines, diagnostics, hospital stay & related items, and other health related expenditures, including transport to and from the health facility, as well as expenditure of an accompanying person.

1.3.1 Sampling Design

This survey used national sampling frameworks (CSA 2007 sampling frame), which has a total of 86,805 EAs, of which 69,462 are in rural and 17,363 are in urban areas. These EAs are found in 83 zones, 731 woredas including special census woredas, and 16,328 kebeles, of which 1,478 are found in urban and 14,850 in rural areas.

The overall sample size of this survey was set based on its comparability to the previous two HA Household surveys (HA IV and V HH surveys). The sampling allocation of the survey was carried out using a three stage stratified sample procedure, which were:

- **Regional allocation:** Regional distribution of the total sample of households was generated based on the regional distribution of the 2007 population census and the 2016 housing census population projections. A power allocation (of a total of sample size of about 10,000 households) was used to allocate EAs (and 25 HH per EA) to different regions.
- **Rural/urban allocation per region:** once the total regional allocation of EAs were known, the number of rural and urban EAs were determined based on the assumptions that each EA will sample 25 HHs.
- **Selecting of EAs per woreda:** With the assumption that 4 EAs would randomly be selected per sample woreda in each region, a total of 101 woredas were determined. Four EAs were selected from each woreda randomly.

⁴ Ravi P. Rannan-Eliya, 2008, National Health Accounts Estimation Methods: Household Out-of-pocket Spending in Private Expenditure; Monograph prepared for WHO/NHA Unit, Geneva, Switzerland.

⁵ WHO, 2003, Guide to producing national health accounts: with special applications for low-income and middle-income countries.

The actual selection of EA sites and woredas were carried out by CSA. It provided the data files of the selected EAs, containing information on number of HHs in each EA (according to the 2007 census) as well as EA maps, and the sampling weight that was used to project the findings to regional and national level. Table 1.1 presents the allocation of HH into EAs and woredas in each region.

Table 1.1 Allocation of Sample HHs to Regions, Rural and Urban areas

| Region | Total CSA 2016 projected Population (000) | Regional share of SQRT* of population | Total sample HHs** | Population by urban/rural (000) | | Urban/rural share of population | | Actual Sample HHs | | |
|-------------------|---|---------------------------------------|--------------------|---------------------------------|---------------|---------------------------------|------------|-------------------|-------------|-------------|
| | | | | Urban | Rural | Urban | Rural | Total | Rural | Urban |
| Tigray | 5152 | 9% | 894 | 1331 | 3821 | 26% | 74% | 895 | 670 | 225 |
| Afar | 1769 | 5% | 524 | 327 | 1442 | 18% | 82% | 525 | 425 | 100 |
| Amhara | 20770 | 18% | 1795 | 3492 | 17278 | 17% | 83% | 1799 | 1501 | 298 |
| Oromia | 34575 | 23% | 2316 | 5105 | 29470 | 15% | 85% | 2319 | 1972 | 347 |
| Somali | 5598 | 9% | 932 | 813 | 4785 | 15% | 85% | 925 | 276 | 649 |
| Benishangul Gumuz | 1034 | 4% | 400 | 215 | 819 | 21% | 79% | 400 | 325 | 75 |
| SNNP | 18719 | 17% | 1704 | 3018 | 15701 | 16% | 84% | 1699 | 1424 | 275 |
| Gambella | 422 | 3% | 256 | 140 | 282 | 33% | 67% | 250 | 175 | 75 |
| Harari | 240 | 2% | 193 | 133 | 107 | 55% | 45% | 175 | 75 | 100 |
| Addis Ababa | 3352 | 7% | 721 | 3352 | 0 | 100% | 0% | 277 | 102 | 175 |
| Dire Dawa | 453 | 3% | 265 | 285 | 168 | 63% | 37% | 722 | 0 | 722 |
| Total | 92084 | 100% | 10,000 | 18,211 | 73,873 | 20% | 80% | 9986 | 6945 | 3041 |

*SQRT- square Root

**HH-households

1.3.2 Controlling for Sampling and Non-Sampling Errors

Generally there are three types of sampling errors that can occur in these kinds of household surveys: sampling error, recall bias and non-sampling errors. Sampling error refers to the exclusion of some regions, segments of population, or groups from the survey. The second error refers to the recall bias of respondents; the inability to accurately remember the details of the services received, their cost, and their timing. Non-sampling error refers to “not asking the right questions” and “not getting what is required” during the survey. The survey tried to put in place mechanisms to reduce these inherent errors.

- The three stage sampling procedure described above was used to minimize sampling errors. However, one of the possible omissions is the exclusion of people that live in institutions - hospitals, nursing homes and prisons. In the Ethiopian context, these groups are few and do not directly pay for their health service they receive.
- The survey used internationally accepted recall periods, which varied by what was being asked. However, there could still be some errors in responses due to seasonality of some of the services and expenditures, like malaria.
- The survey limited the non-sampling errors by employing a number of measures. It used the internally accepted HA HH questionnaire that was previously used twice in Ethiopia. It was

revised to fit the purpose and was agreed to by stakeholders before training of data collection, to ensure that the right questions were asked in the right way. The recruitment of the data collectors was made based on adequate experience in collecting large sample data sets, ability to read cartographic map of EAs, prior experience with electronic data collection, and knowledge of the local languages and culture. Data collectors were trained for 8 days to create a good understanding of the objectives of the survey and the content of the questionnaire, to ensure that data collectors generated what was required.

1.4 Survey Organization

1.4.1 Management Structure of the Survey

Three Work Groups (WGs) were established carry out this HA general household survey, each responsible for different functions in carrying out the survey. The team leader received guidance and oversight from the HA technical working group. The principal investigators led the development of the questionnaire and drafting of the report. The survey manager, supported by both the principal investigators and statistician, led the field operations.

1.4.2 Revision of the HH survey questionnaire

The main instrument for the survey data collection was a structured HH survey questionnaire. This questionnaire was benchmarked from international practice and was also revised from its two previous rounds to fit to the current Ethiopian context and survey objectives. The HA TWG reviewed the revised questionnaire and provided valuable comments. After reviewing the changes made, the HA TWG approved the revised questionnaire for use. The survey questionnaire was further updated based on the feedback generated from enumerators and supervisors during training and pre-test findings. Finally, it was then converted into CAPI format for the actual data collection, and translated from English into five languages: Afar, Amharic, Oromi, Somali and Tigrigna.

The primary respondent of this survey was the head of household, on behalf of all his or her family members, or in his or her absence, any adult member who could answer for each member of the household. This survey did not interview young adults below 18 years. The major content of the standardized interview tool for household is summarized in table 1.2.

Table 1.2 Major Contents of the Health Accounts 6th General Household Survey Questionnaire

| Section of the Questionnaire | Units Covered |
|--|----------------------|
| General information about the household and its members | Per household member |
| Utilization of outpatient and other health related services in the past four weeks | Per Household member |
| Routine health expenses, including community contributions to health systems | Per household member |
| In-patient admission in the last one year | Per household member |
| Mortality | Per household member |
| Access to and use of health insurance | Per household member |
| Household conditions and household Assets | Per household |
| Household Expenditure | Per household |
| Household Income | Per household |

1.4.3 Selection and training of enumerators and data collectors and pretesting the questionnaire

Enumerators and supervisors for this survey were selected based on their experience working on previous surveys. The Ethiopian Economic Association and CSA during the recruitment of the enumerators and supervisors were consulted to ensure that they were skilled, credible and trust worthy. The members of the field team were recruited mainly based on the advice and recommendation of CSA, based on their track record of commitment and use of electronic data collection methods. A Total of 109 enumerators, 22 supervisors and 8 regional coordinators were recruited. The field teams were trained for eight days on data collection tools and processes by the survey team and EPHI, including on:

- Data collection processes, procedures and ethics;
- General training related to basic interview techniques;
- Special sessions on the content of the questionnaire and how to fill it out;
- Working together as a team on mock interviews;
- On the software program, CAPI, and on how to use the tablets;
- On how to transfer the collected information to the IFSS and link with EPHI for comments and revisions;
- Field practice conducted during the pretesting exercise.

Pre-test of the household survey questionnaire was conducted in three regions: in Woreda 7 of Addis Ababa, Gimbichu woreda of Oromia and Chacha woreda of Amhara. The pretest helped to revise survey questionnaire, as well as the CAPI, before deployment. The revised CAPI was re-tested in Addis Ababa.

1.4.4 Data Collection, Processing and Method of Analysis

Data Collection Instruments

Face-to-face interview method was used in collecting the data. The questionnaire was transferred into CSPro programming in the five local languages, plus English, and was loaded into tablets (HP Stream 8 and Nokia Lumia tablets with 3G capability) and mini laptops that were used to electronically enter the data at the time of the interview. Paper instruments (hard-copies) were used to serve only as a back up when the tablets/mini computers failed, which were rare in this survey. The devices were equipped with SIM cards and/or were Wi-Fi-capable, and EPHI's IFSS was used by the team to digitally transfer the data to a central server as soon as Internet connection was available to the enumerators.

1.4.5 Data Quality Control

Enumerators' and Supervisors' Manuals were developed and used to monitor data quality. Field personnel were trained in the required techniques of HA sample surveys. The ratio of supervisors to enumerators was kept to the minimum (one to five) to ensure that there was adequate supervision during data collection. HA technical working group (TWG) members and EPHI were also involved in monitoring the quality of data collection.

The EPHI's previous experience was used to ensure maximum data quality in two ways. The first one involved "close of business day" review and rework processes while in the field, while the second type of effort was a batch data cleanup exercise. EPHI staff helped the team to verify the consistency and completeness of the data entered in the tablets daily

during data collection. The team regularly checked the quality of data and communicated back to the enumerators whenever data quality issues were identified, preferably before leaving the EA. Supervisors and enumerators were able to adjust and correct these issues while still in the field. Fenot and BIC team members were deployed to check the quality of data collection process in Dire Dawa, Oromia, Addis Ababa, and Amhara regions. The EPHI team observed the data collection process in Amhara and Tigray regions.

1.4.6 Analysis

To allow for the comparability of results with previous surveys, standard weighting procedures were used similar to those used in HA IV and V HH surveys. Design weights were adjusted for non-response at EA and household levels. All household members captured in the household questionnaire were assigned the same household weight. All individuals within a cluster who participated in the survey were assigned the same cluster-specific weights for individual interviews.

The data analysts, in conjunction with the report writing team, developed the tabulation plans for the key indicators used in this report. The tabulations were generated using STATA© software. The outputs were then exported to Microsoft Excel© worksheets for formatting and eventual use.

The principal component analysis technique was used for weighting averages of the assets to construct a wealth index (Filmer and Pritchett 2001). A wealth index was used as the first principal component of the variables used (see annex 5) to categorize individuals to different wealth quintiles. Service utilization and out-of-pocket spending of households were categorized into five wealth quintiles: Poorest (Q1), second poorest (Q2), middle (Q3), fourth richest (Q4), and richest (Q5). Household spending for outpatient care was requested only for the last four-week period, and this was converted to an annual cost by multiplying the reported spending by 12. Inpatient expenditures were requested for the last year preceding the survey, and were taken as is. Community contribution to health was calculated by estimating the number hours HDA members reported spending per week, and this was multiplied by 52 and divided by 8 (a day with 8 working hours) to generate the number of days spent per year. Local wage rates were collected during the survey and used to convert the yearly number of days spent by the HDA into monetary terms.

1.5 Limitations of the Survey

While every effort was made to control the quality of the survey, this survey has also its limitations. About 14 households of the proposed sample households were not available or had to be replaced, and the total HHs surveyed for this survey was 9,986. One of the limitations of this survey was its inability to capture the seasonality of some of the health service utilization and associated variation in spending. The sample did not take into account institutional based people like those who stay in hospitals, nursing homes and prisons. The population projected from the CSA sampling frame for this survey was 78.8 million for the year EFY 2008. However, the EFY 2008 projection from the EFY 2000 Ethiopian census was higher. CSA's enumeration areas (EA's) are intended to have a population of about 180 households. However, some of the EAs sampled had populations of less than one hundred, and many had a population of less than 150. As a result, when the sample was projected to the population that they represent, the projection fell short of the CSA's projected population size from the census. This difference in population estimates may have resulted in underestimation of the total out of pocket spending, but does not have an impact on per capita spending.

Chapter 2. Demographic and Socioeconomic Characteristics

2.1 Sex composition and age

The sampled/surveyed households/individuals were projected to the population based on the CSA-provided sample weight for each enumeration area, and all discussion under this section is based on the total population represented by this survey. The number of persons represented by this survey is about 78.8 million⁶, of which females account for 49.9%. The age profile reveals that a little over 50% of the population is of working age. About 48.8% of the total population is considered a dependent, which means, on average, for nearly every working age individual, there is one non-working individual. Disaggregating dependents by those who are children and those who are elderly, 46.03% of dependents are those whose age is less than 15, while 2.8% of the total population is above 65 years.

Table 2.1 Sex Composition and Age of Individuals by Region (%)

| Region | Sex of Individuals | | | | Age of Individuals (years) | | | | | | Total Individuals | |
|-----------------|--------------------|-------|------------|-------|----------------------------|------|------------|------|-----------------|------|-------------------|------|
| | Male | | Female | | Less than 15 | | 15-65 | | Greater than 65 | | | |
| | Frequency | % | Frequency | % | Frequency | % | Frequency | % | Frequency | % | Frequency | % |
| Tigray | 2,198,473 | 5.87 | 2,315,350 | 6.22 | 1,924,316 | 5.6 | 2,360,975 | 6.2 | 228,532 | 11.0 | 4,513,823 | 6.0 |
| Afar | 382,459 | 1.02 | 346,366 | 0.93 | 337,803 | 1.0 | 386,875 | 1.0 | 4,147 | 0.2 | 728,825 | 0.98 |
| Amhara | 8,401,127 | 22.45 | 8,236,639 | 22.11 | 7,008,295 | 20.4 | 9,039,813 | 23.6 | 589,658 | 28.3 | 16,637,766 | 22.3 |
| Oromia | 14,761,588 | 39.44 | 14,373,967 | 38.59 | 14,617,067 | 42.5 | 13,856,951 | 36.2 | 664,743 | 31.9 | 29,138,761 | 39.0 |
| Somali | 1,139,309 | 3.04 | 1,078,918 | 2.9 | 1,220,448 | 3.6 | 941,835 | 2.5 | 56,792 | 2.7 | 2,219,075 | 2.97 |
| B. Gumuz | 445,449 | 1.19 | 426,334 | 1.14 | 362,403 | 1.0 | 484,389 | 1.3 | 24,991 | 1.2 | 871,783 | 1.17 |
| SNNP | 6,960,560 | 18.6 | 6,883,228 | 18.48 | 6,748,577 | 19.6 | 6,824,295 | 17.8 | 270,916 | 13.0 | 13,843,788 | 18.5 |
| Gambella | 167,281 | 0.45 | 164,860 | 0.44 | 125,394 | 0.36 | 203,491 | 0.5 | 3,256 | 0.2 | 332,141 | 0.44 |
| Harari | 302,578 | 0.81 | 285,438 | 0.77 | 271,326 | 0.8 | 300,461 | 0.8 | 16,229 | 0.8 | 588,016 | 0.79 |
| A. Ababa | 2,142,051 | 5.72 | 2,627,052 | 7.05 | 1,246,898 | 3.6 | 3,318,409 | 8.7 | 205,948 | 9.9 | 4,771,255 | 6.39 |
| D. Dawa | 523,624 | 1.4 | 508,066 | 1.36 | 513,273 | 1.5 | 504,595 | 1.3 | 15,538 | 0.7 | 1,033,406 | 1.38 |
| Total | 37,424,499 | 100 | 37,246,218 | 100 | 34,375,800 | 100 | 38,222,089 | 100 | 2,080,750 | 100 | 74,678,639 | 100 |
| Rural | 32,199,157 | 86.04 | 31,263,664 | 83.94 | | | | | | | 63,467,743 | 85 |
| Urban | 5,225,342 | 13.96 | 5,982,554 | 16.06 | | | | | | | 11,210,896 | 15 |

⁶ CSA's enumeration areas (EAs) are intended to have a population of about 180 households. However, some of the EAs sampled had populations of less than one hundred, and many had a population of less than 150. As a result, when the sample was projected to the population that they represent, the projection fell short of the CSA's projected population size from the census.

As can be observed from Table 2.1, about 85% of the total population (represented by this survey) are rural residents. The sex composition does not have significant difference. While 16.06% of the total female population in the country lives in urban areas, only 13.96% of the total male population lives in urban areas.

Table 2.2 Age Categories by Region (%)

| Region | Less than 15 | | 15-65 | | Greater than 65 | | Total % |
|-------------------|-------------------|-------------|-------------------|-------------|------------------|------------|------------|
| | Frequency | % | Frequency | % | Frequency | % | |
| Tigray | 1,924,316 | 42.6 | 2,360,975 | 52.3 | 228,532 | 5.1 | 100 |
| Afar | 337,803 | 46.3 | 386,875 | 53.1 | 4,147 | 0.6 | 100 |
| Amhara | 7,008,295 | 42.1 | 9,039,813 | 54.3 | 589,658 | 3.5 | 100 |
| Oromia | 14,617,067 | 50.2 | 13,856,951 | 47.6 | 664,743 | 2.3 | 100 |
| Somali | 1,220,448 | 55.0 | 941,835 | 42.4 | 56,792 | 2.6 | 100 |
| Benishangul Gumuz | 362,403 | 41.6 | 484,389 | 55.6 | 24,991 | 2.9 | 100 |
| SNNP | 6,748,577 | 48.7 | 6,824,295 | 49.3 | 270,916 | 2.0 | 100 |
| Gambella | 125,394 | 37.8 | 203,491 | 61.3 | 3,256 | 1.0 | 100 |
| Harari | 271,326 | 46.1 | 300,461 | 51.1 | 16,229 | 2.8 | 100 |
| A. Ababa | 1,246,898 | 26.1 | 3,318,409 | 69.6 | 205,948 | 4.3 | 100 |
| D. Dawa | 513,273 | 49.7 | 504,595 | 48.8 | 15,538 | 1.5 | 100 |
| Total | 34,375,800 | 46.0 | 38,222,089 | 51.2 | 2,080,750 | 2.8 | 100 |

The countrywide demographic distribution shows that 51.2% is in the working age group, aged between 15 and 65. This indicates that nearly there is one dependent for one working age person. Addis Ababa is exception in this regard. About 69.6% of the population is in the working age. Next to Addis Ababa is Gambella which has 61.3% of the population in the working age group. On the other side, Ethiopian Somali region has only 42.4% of its population aged between 15 and 65. This means the dependency ratio among Somali residents is higher than any other region. There is more than one person (about 1.4) dependent for one working age person.

2.2 Religion

The most common religion practiced in the country is Christianity, which accounts for 68.39% of the population. The second most prevalent religion practiced is Islam, which accounts for 30.7% of the population. The majority of Christians follow Orthodox Christianity (47.2% of the population), while Protestants account for 19.6% of population and 0.3% of the population are Catholics. Afar, Somali, and Harari regional states and Dire Dawa city administration are predominantly Muslim. Residents in Amhara and Tigray regional states and Addis Ababa city administration are predominantly Orthodox Christian-more than three-fourth of the population in these areas. Protestants account for more than half of the residents in SNNP and Gambella regional states (see Table 2.3).

Table 2.3 Religion of Individuals by Region and Residence (%)

| Region | | Christian | | | Muslim | Others | Total |
|----------|-----------|------------|----------|------------|------------|-----------|------------|
| | | Orthodox | Catholic | Protestant | | | |
| Tigray | Frequency | 3,731,647 | 29,368 | 281,587 | 710,475 | 16,026 | 4,769,103 |
| | % | 78.25 | 0.62 | 5.9 | 14.9 | 0.3 | 100.01 |
| Afar | Frequency | 31,874 | 0 | 24,807 | 660,442 | 11,702 | 728,825 |
| | % | 4.37 | 0 | 3.4 | 90.62 | 1.6 | 100 |
| Amhara | Frequency | 14,347,523 | 6,941 | 3,400 | 2,263,934 | 15,968 | 16,637,766 |
| | % | 86.23 | 0.04 | 0.02 | 13.61 | 0.1 | 100 |
| Oromia | Frequency | 8,610,264 | 60,983 | 6,678,911 | 13,117,931 | 667,466 | 29,135,555 |
| | % | 29.55 | 0.21 | 22.92 | 45.02 | 2.3 | 100 |
| Somali | Frequency | 30,100.00 | 1,974.00 | 11,792.00 | 2,164,936 | 9,312 | 2,218,227 |
| | % | 1.36 | 0.09 | 0.53 | 97.6 | 0.4 | 100 |
| B. Gumuz | Frequency | 422,740 | 4,080 | 50,589 | 392,616 | 1,758 | 871,783 |
| | % | 48.49 | 0.47 | 5.8 | 45.04 | 0.2 | 100 |
| SNNP | Frequency | 3,461,715 | 68,009 | 7,356,990 | 1,997,519 | 959,555 | 13,843,788 |
| | % | 25.01 | 0.49 | 53.14 | 14.43 | 6.9 | 100 |
| Gambella | Frequency | 114,529 | 6,733 | 171,554 | 35,731 | 3,594 | 332,141 |
| | % | 34.48 | 2.03 | 51.65 | 10.76 | 1.1 | 100 |
| Harari | Frequency | 131,952 | 790 | 28,805 | 425,603 | 866 | 588,016 |
| | % | 22.44 | 0.13 | 4.9 | 72.38 | 0.1 | 100 |
| A. Ababa | Frequency | 3,731,647 | 29,368 | 281,587 | 710,475 | 16,026 | 4,769,103 |
| | % | 78.25 | 0.62 | 5.9 | 14.9 | 0.3 | 100 |
| D. Dawa | Frequency | 98,774 | 1,030 | 9,017 | 919,011 | 3,858 | 1,031,690 |
| | % | 9.57 | 0.1 | 0.87 | 89.08 | 0.4 | 100 |
| Total | Frequency | 35,266,892 | 197,232 | 14,619,030 | 22,896,191 | 1,691,372 | 74,670,717 |
| | % | 47.23 | 0.26 | 19.58 | 30.66 | 2.3 | 100 |
| Rural | Frequency | 28,668,844 | 137,542 | 13,614,033 | 19,401,102 | 1,641,300 | 63,462,821 |
| | % | 45.17 | 0.22 | 21.45 | 30.57 | 2.59 | 100 |
| Urban | Frequency | 6,598,048 | 59,690 | 1,004,997 | 3,495,089 | 50,072 | 11,207,896 |
| | % | 58.87 | 0.53 | 8.97 | 31.18 | 0.45 | 100 |

Religion by residence reveals important features. The majority of urban dwellers are Orthodox Christians (59%), whereas Orthodox Christians compose a smaller proportion of the rural population (45%). Protestants are much more likely to reside in rural areas, where they compose 21.5% of the rural population (compared to only 9% of the urban population). Muslims are fairly equally distributed between rural and urban areas, with 30.6% of the rural population being Muslim, and 31.2% of the urban population being Muslim (see Table 2.3).

2.3 Marital Status

Of the total sampled population aged 15 and above, 57.1% are currently married to one husband/wife (table 2.4). About 31.7% of the population 15 year and older have never married. However, there are regional differences in marital status. The proportion of married persons in Afar is higher than any other regions (73.8%), while Addis Ababa has the lowest proportion of married adults (42.0%). This difference might be because people in rural areas are more likely to be married at younger ages than people in urban areas. Indeed, a larger proportion of never married are found in Addis Ababa (44.4%). Men marrying more than one wife is most common in Somali region (6.3%), followed by SNNP region (3.7%). While divorce rates are generally low, divorce is highest in Tigray (7.5%) followed by Amhara (6.2%). Being a widow is more common in Harari (8.8%) followed by Tigray (7.9%), Addis Ababa (7.2%) and Dire Dawa (7%).

Table 2.4 Marital Status by Region and Residence - Aged 15 Years and Above (%)

| Region | | Never Married | Married one wife / husband | Married with two or more wives | Lives with a partner | Divorced | Widowed | Separated | Don't know | Total |
|--------------|-----------|-------------------|----------------------------|--------------------------------|----------------------|------------------|------------------|----------------|---------------|-------------------|
| Tigray | Frequency | 844,971 | 1,400,071 | 7,635 | 3,982 | 201,963 | 211,871 | 20,099 | 0 | 2,690,592 |
| | % | 31.4 | 52.0 | 0.3 | 0.2 | 7.5 | 7.9 | 0.8 | 0.0 | 100 |
| Afar | Frequency | 73,162 | 298,942 | 2,312 | 0 | 8,237 | 21,167 | 1,430 | 0 | 405,250 |
| | % | 18.1 | 73.8 | 0.6 | 0.0 | 2.0 | 5.2 | 0.4 | 0.0 | 100 |
| Amhara | Frequency | 2,959,029 | 5,971,270 | 89,921 | 7,036 | 631,791 | 487,764 | 60,182 | 3,731 | 10,210,724 |
| | % | 29.0 | 58.5 | 0.9 | 0.1 | 6.2 | 4.8 | 0.6 | 0.0 | 100 |
| Oromia | Frequency | 4,957,850 | 8,990,646 | 323,385 | 4,248 | 250,241 | 678,574 | 131,841 | 7,229 | 15,344,014 |
| | % | 32.3 | 58.6 | 2.1 | 0.0 | 1.6 | 4.4 | 0.9 | 0.1 | 100 |
| Somali | Frequency | 322,269 | 591,881 | 66,467 | 0 | 21,134 | 53,341 | 6,324 | 400 | 1,061,816 |
| | % | 30.4 | 55.7 | 6.3 | 0.0 | 2.0 | 5.0 | 0.6 | 0.0 | 100 |
| B.Gumuz | Frequency | 166,142 | 314,738 | 12,268 | 220 | 23,022 | 17,793 | 1,020 | 0 | 535,203 |
| | % | 31.0 | 58.8 | 2.3 | 0.0 | 4.3 | 3.3 | 0.2 | 0.0 | 100 |
| SNNP | Frequency | 2,272,390 | 4,532,128 | 281,198 | 0 | 70,513 | 396,476 | 28,024 | 0 | 7,580,729 |
| | % | 30.0 | 59.8 | 3.7 | 0.0 | 0.9 | 5.2 | 0.4 | 0.0 | 100 |
| Gambella | Frequency | 72,078 | 118,825 | 1,281 | 0 | 9,579 | 14,532 | 841 | 0 | 217,136 |
| | % | 33.2 | 54.7 | 0.6 | 0.0 | 4.4 | 6.7 | 0.4 | 0.0 | 100 |
| Harari | Frequency | 88,183 | 195,300 | 7,052 | 0 | 13,933 | 29,647 | 3,102 | 0 | 337,217 |
| | % | 26.2 | 57.9 | 2.1 | 0.0 | 4.1 | 8.8 | 0.9 | 0.0 | 100 |
| A. Ababa | Frequency | 1,603,099 | 1,519,133 | 823 | 2,152 | 174,774 | 259,964 | 54,197 | 0 | 3,614,142 |
| | % | 44.4 | 42.0 | 0.0 | 0.1 | 4.8 | 7.2 | 1.5 | 0.0 | 100 |
| D. Dawa | Frequency | 139,826 | 339,821 | 2,891 | 1,175 | 17,837 | 38,646 | 9,399 | 1,175 | 550,770 |
| | % | 25.4 | 61.7 | 0.5 | 0.2 | 3.2 | 7.0 | 1.7 | 0.2 | 100 |
| Total | Frequency | 13,498,999 | 24,272,755 | 795,233 | 18,813 | 1,423,024 | 2,209,775 | 316,459 | 12,535 | 42,547,593 |
| | % | 31.7 | 57.1 | 1.9 | 0.0 | 3.3 | 5.2 | 0.7 | 0.0 | 100.0 |
| Rural | Frequency | 10,337,393 | 20,712,278 | 729,811 | 13,331 | 1,068,569 | 1,676,572 | 205,721 | 12,135 | 34,755,810 |
| | % | 29.7 | 59.6 | 2.1 | 0.0 | 3.1 | 4.8 | 0.6 | 0.0 | 100 |
| Urban | Frequency | 3,161,606 | 3,560,477 | 65,422 | 5,482 | 354,455 | 533,203 | 110,738 | 400 | 7,791,783 |
| | % | 40.6 | 45.7 | 0.8 | 0.1 | 4.6 | 6.8 | 1.4 | 0.0 | 100.0 |

2.4 Educational Status

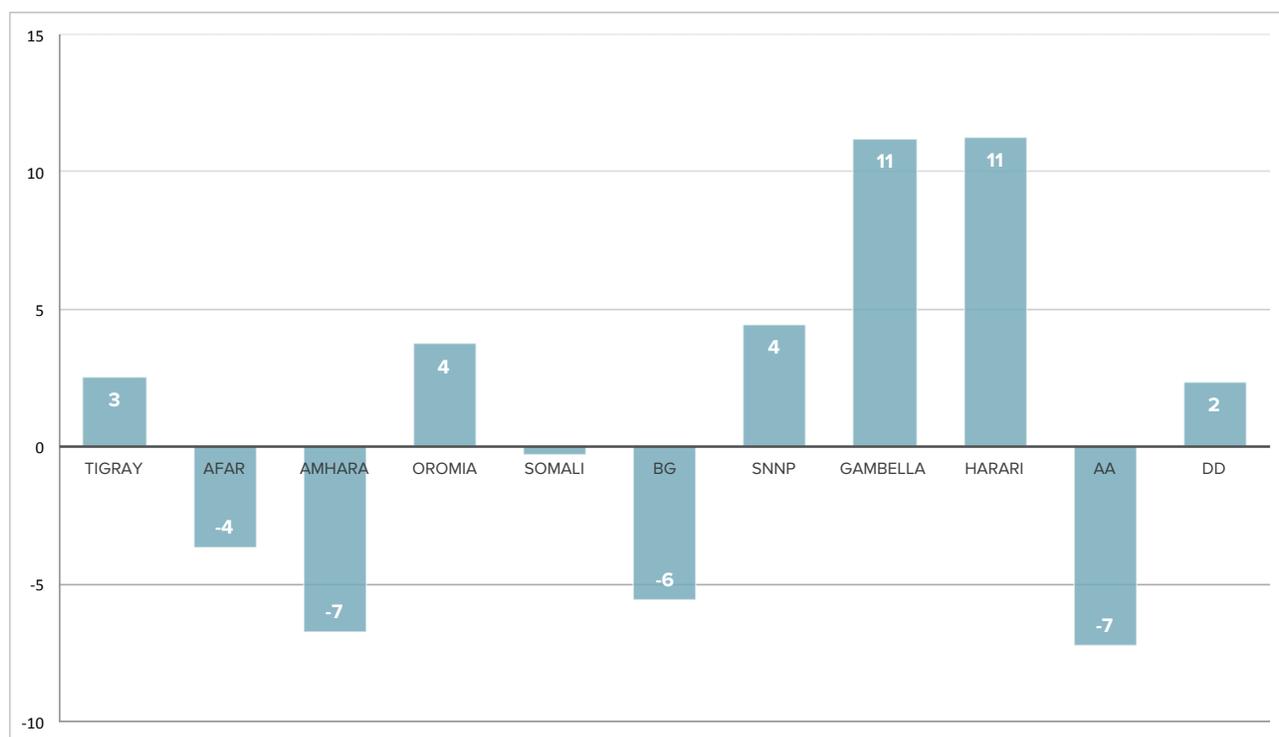
Sampled households were asked about the educational status of each individual whose age was seven years and above. From the population this survey represents, more than half (55%) of the individuals whose age is seven and above had no formal and informal education. This is worse for women (71%) as compared with men (50%). About 2% of the population aged 7 or more went through adult education while 18% and 5% are primary school incomplete and complete respectively. Nationally, 4.9% completed secondary education, and 6% completed university, college, or receive a technical diploma.

Table 2.5 Highest Educational Attainment of Individuals by Sex, Age 7 Years and Above

| Highest grade completed | Male | Female | National |
|--|----------------|----------------|----------------|
| No formal or informal education | 50.44% | 71.47% | 55.12% |
| Adult education | 2.25% | 1.04% | 1.98% |
| Church/Mosque | 2.69% | 0.05% | 2.10% |
| Pre-Primary | 0.62% | 0.18% | 0.52% |
| Primary education incomplete | 20.64% | 9.98% | 18.28% |
| Primary education complete | 5.65% | 3.31% | 5.13% |
| Secondary education incomplete | 4.84% | 3.45% | 4.53% |
| Secondary education (grade 10/12) complete | 5.14% | 4.08% | 4.91% |
| Tech/Vocational certificate | 0.69% | 1.27% | 0.81% |
| University /College/Technical diploma | 4.39% | 4.22% | 4.35% |
| University /college degree or higher | 2.44% | 0.95% | 2.11% |
| Don't know | 0.21% | 0.00% | 0.16% |
| Total | 100.00% | 100.00% | 100.00% |
| Can read and write | Male | Female | National |
| Yes | 52.04% | 29.84% | 47.13% |
| No | 47.88% | 70.11% | 52.80% |
| Don't know | 0.08% | 0.05% | 0.07% |
| Total | 100.00% | 100.00% | 100.00% |

As might be expected, secondary education, and any education beyond secondary level is more commonly observed in urban areas. Urban populations are much more likely to have completed secondary education and received diplomas from higher learning institutions (see Table 2.5).

Figure 2.1 Regional Disparity in Primary Education Completed



2.5 Employment and Occupation

Table 2.6 presents information on employment status. About 36.5% of the total working age population were employed in formal or informal jobs outside of the home in the 12 months preceding the survey. A large proportion of the population were currently students (33.7%), 15.9% of the population reported working in the home as housewives or housemaids, and 9.9% reported “other”. A small percent of the population reported either seeking work (2.2%) or being retired (1.1%), with those in urban areas more likely to be ‘seeking work’ than those in rural areas (5.4% and 1.2% respectively). Afar region has the highest rate of those currently working outside the home (53.3%) and Dire Dawa has the lowest rate (28.6%). As the majority of individuals’ main occupation is farming (see Table 2.7), the majority of employed persons were self-employed workers. While the dominant occupation in rural area is farming, private sector constitutes dominant type of employment in urban areas (see Table 2.6).

Of those who are employed, either formally or informally, the main occupation is farming (65.3%). Disaggregating employment by rural and urban; farming is the main occupation for rural areas (77.7%) and the private sector is the main occupation in urban areas (51.6%).

Table 2.6 Employment Status of Individuals by Region and Residence (%)

| Region | | Currently Working (formal/ informal employment) | Seeking work | Retired | Housewife/ Housemaid | Student | Others | Don't Know | Total |
|----------|-----------|---|-----------------|---------|-------------------------|------------|-----------|------------|------------|
| Tigray | Frequency | 1,336,738 | 140,310 | 81,666 | 684,450 | 1,277,444 | 339,943 | 27,811 | 3,888,362 |
| | % | 34.38 | 3.61 | 2.10 | 17.60 | 32.85 | 8.74 | 0.72 | 100 |
| Afar | Frequency | 317,955 | 20,279 | 1,436 | 93,960 | 97,182 | 61,230 | 4,128 | 596,170 |
| | % | 53.33 | 3.40 | 0.24 | 15.76 | 16.30 | 10.27 | 0.69 | 100 |
| Amhara | Frequency | 6,309,998 | 248,806 | 84,171 | 2,046,647 | 5,123,171 | 1,064,451 | 25,092 | 14,902,336 |
| | % | 42.34 | 1.67 | 0.56 | 13.73 | 34.38 | 7.14 | 0.17 | 100 |
| Oromia | Frequency | 8,890,270 | 376,345 | 248,289 | 3,653,749 | 8,433,914 | 3,194,148 | 182,239 | 24,978,954 |
| | % | 35.59 | 1.51 | 0.99 | 14.63 | 33.76 | 12.79 | 0.73 | 100.00 |
| Somali | Frequency | 608,804 | 40,926 | 34,475 | 413,322 | 460,905 | 269,413 | 3,746 | 1,831,591 |
| | % | 33.24 | 2.23 | 1.88 | 22.57 | 25.16 | 14.71 | 0.20 | 100.00 |
| B.Gumuz | Frequency | 316,948 | 8,932 | 6,913 | 95,304 | 294,935 | 21,183 | 25,505 | 769,720 |
| | % | 41.18 | 1.16 | 0.90 | 12.38 | 38.32 | 2.75 | 3.31 | 100 |
| SNNP | Frequency | 3,545,175 | 201,588 | 56,247 | 2,289,767 | 4,377,555 | 1,262,654 | 197,782 | 11,930,768 |
| | % | 29.71 | 1.69 | 0.47 | 19.19 | 36.69 | 10.58 | 1.66 | 100.00 |
| Gambella | Frequency | 116,276 | 6,537 | 1,147 | 40,990 | 106,240 | 32,206 | 586 | 303,982 |
| | % | 38.25 | 2.15 | 0.38 | 13.48 | 34.95 | 10.59 | 0.19 | 100.00 |
| Harari | Frequency | 184,132 | 15,600 | 21,035 | 67,192 | 162,141 | 34,775 | 6,041 | 490,916 |
| | % | 37.51 | 3.18 | 4.28 | 13.69 | 33.03 | 7.08 | 1.23 | 100.00 |
| A. Ababa | Frequency | 1,829,846 | 303,724 | 176,357 | 743,172 | 1,232,324 | 35,951 | 3,010 | 4,324,384 |
| | % | 42.31 | 7.02 | 4.08 | 17.19 | 28.50 | 0.83 | 0.07 | 100 |
| D. Dawa | Frequency | 256,217 | 32,154 | 5,229 | 177,454 | 337,775 | 81,809 | 4,838 | 895,476 |
| | % | 28.61 | 3.59 | 0.58 | 19.82 | 37.72 | 9.14 | 0.54 | 100 |
| Total | Frequency | 23,712,359 | 1,395,201 | 716,965 | 10,306,007 | 21,903,586 | 6,397,763 | 480,778 | 64,912,659 |
| | % | 36.53 | 2.15 | 1.10 | 15.88 | 33.74 | 9.86 | 0.74 | 100.00 |
| Rural | Frequency | 19,795,957 | 854,305 | 402,638 | 8,617,247 | 18,821,175 | 5,978,616 | 454,200 | 54,924,138 |
| | % | 36.04 | 1.56 | 0.73 | 15.69 | 34.27 | 10.89 | 0.83 | 100.00 |
| Urban | Frequency | 3,916,402 | 540,896 | 314,327 | 1,688,760 | 3,082,411 | 419,147 | 26,578 | 9,988,521 |
| | % | 39.21 | 5.42 | 3.15 | 16.91 | 30.86 | 4.20 | 0.27 | 100.00 |

Table 2.7: Occupation Status of Individuals by Region and Residence (%)

| Region | | Farming | Housewife/ Housemaid | Shepherd | Civil Servant | Private sector | Pastoralist | Agro pastoralist | Fishing | Retail and wholesale trade | Not declared | Other (specify) | Don't know | Total |
|----------|-----------|------------|-------------------------|-----------|------------------|-------------------|-------------|---------------------|---------|-------------------------------|--------------|-----------------|------------|------------|
| Tigray | Frequency | 827,522 | 8,599 | 67,318 | 109,246 | 192,751 | 2,186 | 2,170 | 0.00 | 68,222 | 6,425 | 50,322 | 1,977 | 1,336,738 |
| | % | 61.91 | 0.64 | 5.04 | 8.17 | 14.42 | 0.16 | 0.16 | 0.00 | 5.10 | 0.48 | 3.76 | 0.15 | 100 |
| Afar | Frequency | 754 | 11,840 | 24,477 | 55,090 | 32,034 | 156,002 | 844 | 0.00 | 29,682 | 0.00 | 6,601 | 631 | 317,955 |
| | % | 0.24 | 3.72 | 7.70 | 17.33 | 10.08 | 49.06 | 0.27 | 0.00 | 9.34 | 0.00 | 2.08 | 0.20 | 1000.0 |
| Amhara | Frequency | 4,748,144 | 316,301 | 580,536 | 135,277 | 259,703 | 5,343 | 7,188 | 0.00 | 193,299 | 6,310 | 54,565 | 3,332 | 6,309,998 |
| | % | 75.25 | 5.01 | 9.20 | 2.14 | 4.12 | 0.08 | 0.11 | 0.00 | 3.06 | 0.10 | 0.86 | 0.05 | 100 |
| Oromia | Frequency | 6,838,728 | 464,327 | 344,461 | 237,793 | 359,988 | 28,741 | 8,604 | 0.00 | 396,513 | 21,537 | 159,150 | 34,927 | 8,894,769 |
| | % | 76.88 | 5.22 | 3.87 | 2.67 | 4.05 | 0.32 | 0.10 | 0.00 | 4.46 | 0.24 | 1.79 | 0.39 | 100 |
| Somali | Frequency | 78,795 | 3,980 | 146,210 | 40,273 | 58,527 | 148,033 | 70,316 | 1,075 | 31,359 | 4,236 | 21,781 | 4,219 | 608,804 |
| | % | 12.94 | 0.65 | 24.02 | 6.62 | 9.61 | 24.32 | 11.55 | 0.18 | 5.15 | 0.70 | 3.58 | 0.69 | 100 |
| B.Gumuz | Frequency | 211,301 | 1,258 | 5,217 | 38,115 | 36,974 | 0.00 | 0.00 | 0.00 | 21,096 | 345 | 2,376 | 266 | 316948.00 |
| | % | 66.67 | 0.40 | 1.65 | 12.03 | 11.67 | 0.00 | 0.00 | 0.00 | 6.66 | 0.11 | 0.75 | 0.08 | 100 |
| SNNP | Frequency | 2,509,033 | 44,572 | 119,115 | 170,688 | 242,945 | 78,953 | 22,904 | 0.00 | 298,963 | 4,616 | 48,572 | 4,814 | 3,545,175 |
| | % | 70.77 | 1.26 | 3.36 | 4.81 | 6.85 | 2.23 | 0.65 | 0.00 | 8.43 | 0.13 | 1.37 | 0.14 | 100 |
| Gambella | Frequency | 66,356 | 1,531 | | 16,540 | 11,079 | 815 | 0.00 | 0.00 | 11,339 | 0.00 | 8,616 | 0.00 | 116,276 |
| | % | 57.07 | 1.32 | | 14.22 | 9.53 | 0.7 | 0.00 | 0.00 | 9.75 | 0.00 | 7.41 | 0.00 | 100 |
| Harari | Frequency | 67,333 | 2,268 | 866 | 32,307 | 33,066 | 0.00 | 0.00 | 0.00 | 39,187 | 0.00 | 9,105 | 0.00 | 9,105 |
| | % | 36.57 | 1.23 | 0.47 | 17.55 | 17.96 | 0.00 | 0.00 | 0.00 | 21.28 | 0.00 | 4.94 | 0.00 | 100 |
| A. Ababa | Frequency | 3,312 | 23,833 | 0.00 | 308,312 | 1,303,107 | 0.00 | 0.00 | 0.00 | 132,794 | 8,407 | 50,081 | 0.00 | 1,829,846 |
| | % | 0.18 | 1.30 | 0.00 | 16.85 | 71.21 | 0.00 | 0.00 | 0.00 | 7.26 | 0.46 | 2.74 | 0.00 | 100 |
| D. Dawa | Frequency | 144,306 | 1,175 | 6,776 | 28,647 | 42,703 | 1,260 | 0.00 | 253 | 29,257 | 0.00 | 1,840 | 0.00 | 256,217 |
| | % | 56.32 | 0.46 | 2.64 | 11.18 | 16.67 | 0.49 | 0.00 | 0.10 | 11.42 | 0.00 | 0.72 | 0.00 | 100 |
| Total | Frequency | 15,495,584 | 879,684 | 1,294,976 | 1,172,288 | 2,572,877 | 421,333 | 112,026 | 1,328 | 1,251,711 | 51,876 | 413,009 | 50,166 | 23,716,858 |
| | % | 65.34 | 3.71 | 5.46 | 4.94 | 10.85 | 1.78 | 0.47 | 0.01 | 5.28 | 0.22 | 1.74 | 0.21 | 100 |
| Rural | Frequency | 15,376,886 | 826,954 | 1,188,893 | 429,937 | 553,951 | 326,426 | 58,285 | 272 | 721,800 | 36,601 | 236,430 | 44,021 | 19,800,456 |
| | % | 77.66 | 4.18 | 6.00 | 2.17 | 2.80 | 1.65 | 0.29 | 0.00 | 3.65 | 0.18 | 1.19 | 0.22 | 100 |
| Urban | Frequency | 118,698 | 52,730 | 106,083 | 742,351 | 2,018,926 | 94,907 | 53,741 | 1,056 | 529,911 | 15,275 | 176,579 | 6,145 | 3,916,402 |
| | % | 3.03 | 1.35 | 2.71 | 18.95 | 51.55 | 2.42 | 1.37 | 0.03 | 13.53 | 0.39 | 4.51 | 0.16 | 100 |

2.6 Housing and Housing Amenities

Table 2.8 shows that about 79% of the respondents live in permanent dwellings, while 12.8% live in traditional dwellings, 6.2% live in semi-permanent dwellings, and 2% live in temporary dwellings. In terms of regional states, people are most likely to live in permanent dwellings in Benishangul Gumuz regional state (99.8%), Dire Dawa city council (99.03%) and Harari regional state (97.81%). People are least likely to live in permanent dwellings in Afar (36.9%) and Somali (37.5%) regions, as these regions have large pastoral and semi-pastoral populations. It is notable that Addis Ababa has the highest proportion of people living in ‘temporary’ dwellings (16.7% of the Addis Ababa population).

Table 2.8 Housing Characteristics (types of dwelling) by Region (%)

| Region | | Permanent building | Semi Permanent | Temporary | Traditional | Total |
|----------|-----------|--------------------|----------------|-----------|-------------|------------|
| Tigray | Frequency | 976,477 | 11,812 | - | 69,636 | 1,057,925 |
| | % | 92.3 | 1.1 | - | 6.6 | 100.0 |
| Afar | Frequency | 67,004 | 25,156 | 1,569 | 87,638 | 181,367 |
| | % | 36.9 | 13.9 | 0.9 | 48.3 | 100.0 |
| Amhara | Frequency | 3,161,329 | 141,372 | 8,258 | 490,041 | 3,801,000 |
| | % | 83.2 | 3.7 | 0.2 | 12.9 | 100.0 |
| Oromia | Frequency | 4,943,394 | 136,589 | 18,025 | 412,421 | 5,510,429 |
| | | 89.7 | 2.5 | 0.3 | 7.5 | 100.0 |
| Somali | Frequency | 149,265 | 64,239 | 49,367 | 1352,68 | 398,139 |
| | % | 37.5 | 16.1 | 12.4 | 34.0 | 100.0 |
| B.Gumuz | Frequency | 205,329 | 421 | - | - | 205,750 |
| | % | 99.8 | 0.2 | - | - | 100.0 |
| SNNP | Frequency | 1,616,724 | 464,358 | 15,412 | 780,137 | 2,876,631 |
| | % | 56.2 | 16.1 | 0.5 | 27.1 | 100.0 |
| Gambella | Frequency | 45,726 | 1,323 | 12,980 | 25,821 | 85,850 |
| | % | 53.3 | 1.5 | 15.1 | 30.1 | 100.0 |
| Harari | Frequency | 147,940 | 3,310 | - | - | 151,250 |
| | % | 97.8 | 2.2 | - | - | 100.0 |
| A. Ababa | Frequency | 882,248 | 132,288 | 206,639 | 14,067 | 1,235,242 |
| | % | 71.4 | 10.7 | 16.7 | 1.1 | 100.0 |
| D. Dawa | Frequency | 224,199 | 1,321 | 880 | - | 226,400 |
| | % | 99.0 | 0.6 | 0.4 | - | 100.0 |
| Total | Frequency | 12,419,635 | 982,189 | 313,130 | 2,015,029 | 15,729,983 |
| | % | 79.0 | 6.2 | 2.0 | 12.8 | 100.0 |
| Rural | Frequency | | 10,087,440 | 751,083 | 44,990 | 1,899,726 |
| | % | | 78.9 | 5.9 | 0.4 | 14.9 |
| Urban | Frequency | | 2,332,195 | 231,106 | 268,140 | 115,303 |
| | % | | 79.1 | 7.8 | 9.1 | 3.9 |

The majority of respondents reported living in houses they own. Table 2.9 shows that about 85.4% of the total respondents live in their own houses. As one would expect, living in a rented house is much more common in urban areas than rural areas (52.6% and 4.2% respectively) (see Table 2.9). The survey also explored variation of household access to different housing amenities among regions. Addis Ababa has the least number of people living in a house they

own (36.84%) while a little over 93% of the respondents in Oromia reported living in their own houses. While the average figure for respondents who live in rented houses is 13.24%, this is as high as 60.3% in Addis Ababa.

Table 2.9 Dwelling Ownership Status by Region and Residence (%)

| Region | | Owned by household | Rented | Occupied without payment | Other | Total |
|--------------|------------------|--------------------|------------------|--------------------------|---------------|-------------------|
| Tigray | Frequency | 768,110 | 236,231 | 53,584 | - | 1,057,925 |
| | % | 72.6 | 22.3 | 5.1 | - | 100.0 |
| Afar | Frequency | 154,071 | 25,536 | 1,688 | 72 | 181,367 |
| | % | 85.0 | 14.1 | 0.9 | - | 100.0 |
| Amhara | Frequency | 3,404,471 | 373,410 | 21,187 | 1,932 | 3,801,000 |
| | % | 89.6 | 9.8 | 0.6 | 0.1 | 100.0 |
| Oromia | Frequency | 5,144,722 | 328,218 | 33,889 | 3,600 | 5,510,429 |
| | % | 93.4 | 6.0 | 0.6 | 0.1 | 100.0 |
| Somali | Frequency | 355,295 | 28,556 | 12,600 | 1,688 | 398,139 |
| | % | 89.2 | 7.2 | 3.2 | 0.4 | 100.0 |
| B.Gumuz | Frequency | 154,923 | 48,563 | 2,264 | - | 205,750 |
| | % | 75.3 | 23.6 | 1.1 | - | 100.0 |
| SNNP | Frequency | 2,668,994 | 175,747 | 25,174 | 6,716 | 2,876,631 |
| | % | 92.8 | 6.1 | 0.9 | 0.2 | 100.0 |
| Gambella | Frequency | 66,076 | 18,614 | 931 | 229 | 85,850 |
| | % | 77.0 | 21.7 | 1.1 | 0.3 | 100.0 |
| Harari | Frequency | 92,459 | 53,527 | - | 5,264 | 151,250 |
| | % | 61.1 | 35.4 | - | 3.5 | 100.0 |
| A. Ababa | Frequency | 455,024 | 745,108 | 15,538 | 19,572 | 1,235,242 |
| | % | 36.8 | 60.3 | 1.3 | 1.6 | 100.0 |
| D. Dawa | Frequency | 162,791 | 49,924 | 10,832 | 2,853 | 226,400 |
| | % | 72.0 | 22.0 | 5.0 | 1.0 | 100.0 |
| Total | Frequency | 13,426,936 | 2,083,434 | 177,687 | 41,926 | 15,729,983 |
| | % | 85.4 | 13.2 | 1.1 | 0.3 | 100.0 |
| Rural | Frequency | 12,131,481 | 533,116 | 118,341 | 301 | 12,783,239 |
| | % | 94.9 | 4.2 | 0.9 | - | 100.0 |
| Urban | Frequency | 1,295,455 | 1,550,318 | 59,346 | 41,625 | 2,946,744 |
| | % | 44.0 | 52.6 | 2.0 | 1.4 | 100.0 |

Table 2.10 shows that 85.2% of respondents live in houses with floors that are made of mud/cow dung. This kind of floor is very difficult to keep clean and signals high levels of poverty. Generally, it is poor people that live in a house with a floor made of mud. This average figure masks regional disparity. A little over 96% of the respondents in Amhara region live in houses with floor made of mud. It is only in Addis Ababa city administration where most households live in a house with relatively better flooring. In Addis Ababa, 24% of the respondents live in a house with a mud floor, while 64.5% live in houses with floor made of cement/bricks.

Table 2.10 Main Types of Floor of the House by Region (%)

| Region | | Mud/cow dung | Stone | Cement/bricks | Hall block | Wood | Grass | Iron sheets | Tiles | Other | Total |
|--------------|------------------|-------------------|---------------|------------------|---------------|---------------|--------------|---------------|----------------|----------------|-------------------|
| Tigray | Frequency | 843,949 | 6,353 | 201,094 | 1,422 | - | - | - | - | 5,107 | 1,057,925 |
| | % | 79.8 | 0.6 | 19 | 0.1 | 0 | 0 | 0 | 0 | 0.5 | 100 |
| Afar | Frequency | 165,012 | | 14,404 | 481 | 907 | 563 | - | - | - | 181,367 |
| | % | 91 | 0 | 7.9 | 0.3 | 0.5 | 0.3 | 0 | 0 | 0 | 100 |
| Amhara | Frequency | 3,675,648 | 7,007 | 100,548 | - | 4,188 | 4,661 | 8,948 | - | - | 3,801,000 |
| | % | 96.7 | 0.2 | 2.7 | 0 | 0.1 | 0.1 | 0.2 | 0 | 0 | 100 |
| Oromia | Frequency | 4,930,943 | 28,740 | 265,385 | 641 | 20,292 | 1,222 | 845 | 243,317 | 19,044 | 5,510,429 |
| | % | 89.5 | 0.5 | 4.8 | 0 | 0.4 | 0 | 0 | 4.4 | 0.4 | 100 |
| Somali | Frequency | 337,316 | 191 | 45,511 | 2,019 | 4,977 | 1,818 | 618 | 4,415 | 1,274 | 398,139 |
| | % | 84.7 | 0.1 | 11.4 | 0.5 | 1.3 | 0.5 | 0.2 | 1.1 | 0.3 | 100 |
| B.Gumuz | Frequency | 185,424 | 797 | 19,529 | - | - | - | - | - | - | 205,750 |
| | % | 90.1 | 0.4 | 9.5 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| SNNP | Frequency | 2,664,659 | 11,520 | 147,824 | 3,272 | 300 | - | - | 6,066 | 42,990 | 2,876,631 |
| | % | 92.6 | 0.4 | 5.1 | 0.1 | 0 | 0 | 0 | 0.2 | 1.5 | 100 |
| Gambella | Frequency | 75,957 | 9,230 | - | - | 663 | - | - | - | - | 85,850 |
| | % | 88.5 | 10.8 | 0 | 0 | 0.8 | 0 | 0 | 0 | 0 | 100 |
| Harari | Frequency | 74,245 | - | 75,946 | - | - | - | - | 1,059 | - | 151,250 |
| | % | 49.1 | 0 | 50.2 | 0 | 0 | 0 | 0 | 0.7 | 0 | 100 |
| A. Ababa | Frequency | 298,632 | 11,843 | 796,699 | 11,936 | 35,023 | - | - | 8,978 | 72,131 | 1,235,242 |
| | % | 24.2 | 1 | 64.5 | 1 | 2.8 | 0 | 0 | 0.7 | 5.8 | 100 |
| D. Dawa | Frequency | 146,271 | 7,866 | 70,657 | - | - | - | - | 1,606 | - | 226,400 |
| | % | 64.6 | 3.5 | 31.2 | 0 | 0 | 0 | 0 | 0.7 | 0 | 100 |
| Total | Frequency | 13,398,056 | 74,317 | 1,746,827 | 19,771 | 66,350 | 8,264 | 10,411 | 265,441 | 140,546 | 15,729,983 |
| | % | 85.2 | 0.5 | 11.1 | 0.1 | 0.4 | 0.1 | 0.1 | 1.7 | 0.9 | 100 |
| Rural | Frequency | 12,191,211 | 26,369 | 229,165 | 2,181 | 25,135 | 6,936 | 8,948 | 239,967 | 53,327 | 12,783,239 |
| | % | 95.4 | 0.2 | 1.8 | 0 | 0.2 | 0.1 | 0.1 | 1.9 | 0.4 | 100 |
| Urban | Frequency | 1,206,845 | 47,948 | 1,517,662 | 17,590 | 41,215 | 1,328 | 1,463 | 25,474 | 87,219 | 2,946,744 |
| | % | 41 | 1.6 | 51.5 | 0.6 | 1.4 | 0.1 | 0.1 | 0.9 | 3 | 100 |

The survey also explored household's access to different housing amenities, and access to improved sanitation facilities. Table 2.11 shows that only 5.9% of respondents have access to improved toilet facilities (own flush toilet, shared flush toilet and ventilated improved pit latrine)⁷. This figure is lower than the 2014 DHS estimate, which is 9%. The overwhelming majority (94.1%) of the population, according to the HH survey are using unimproved toilet facilities. About 71.4% are using traditional pit latrines, and 22.4% are using bush/field. Those who are using bush/field are significantly less than the 2014 DHS estimate, which was 34.1%, and the 2016 DHS estimate, which was 32.3%. This might be due to the concerted effort by the government and donors/NGOs for open defecation free (ODF) and health extension works at the grassroots level.

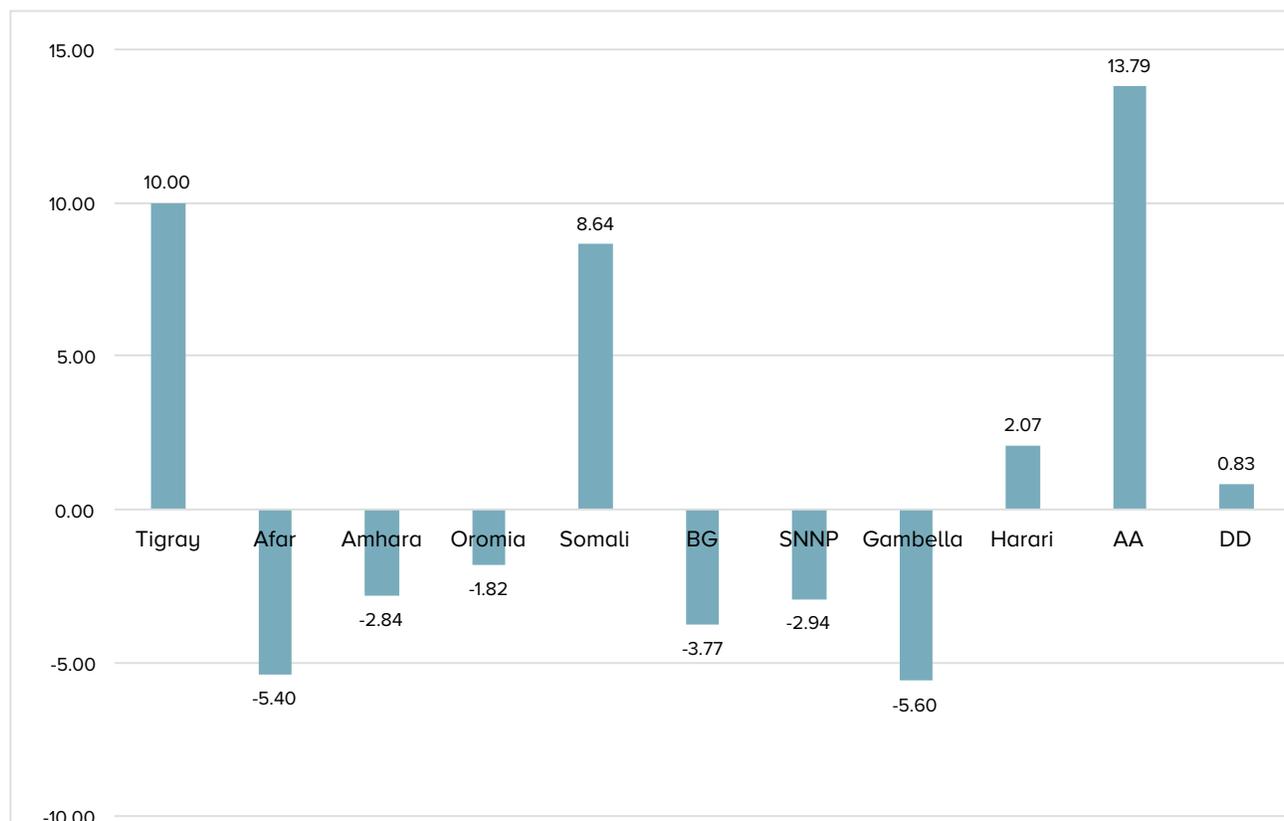
Table 2.11 Type of Toilet Facility by Region and Residence (%)

| Region | | Own flush toilet | Shared Flush Toilet | Traditional pit latrine | Ventilated Improved Pit Latrine | Bush or field | Bucket latrine | Other | Total |
|----------|-----------|------------------|---------------------|-------------------------|---------------------------------|---------------|----------------|--------|------------|
| Tigray | Frequency | 14,215 | 144,185 | 368,190 | 10,100 | 518,115 | 950.0 | 2,170 | 1,057,925 |
| | % | 1.3 | 13.6 | 34.8 | 1.0 | 49.0 | 0.1 | 0.2 | 100.0 |
| Afar | Frequency | - | 947 | 40,898 | - | 139,522 | - | - | 181,367 |
| | % | - | 0.5 | 22.6 | - | 76.9 | - | - | 100.0 |
| Amhara | Frequency | 50,021 | 34,713 | 2,761,069 | 32,395 | 917,735 | - | 5,067 | 3,801,000 |
| | % | 1.3 | 0.9 | 72.6 | 0.9 | 24.1 | - | 0.1 | 100.0 |
| Oromia | Frequency | 35,917 | 10,527 | 3,978,837 | 179,697 | 1,297,146 | - | 8,305 | 5,510,429 |
| | % | 0.7 | 0.2 | 72.2 | 3.3 | 23.5 | - | 0.2 | 100.0 |
| Somali | Frequency | 9,164 | 16,381 | 87,747 | 32,462 | 250,432 | - | 1,953 | 398,139 |
| | % | 2.3 | 4.1 | 22.0 | 8.2 | 62.9 | - | 0.5 | 100.0 |
| B.Gumuz | Frequency | 530 | 954 | 196,761 | 2,943 | 4,141 | - | 421 | 205,750 |
| | % | 0.3 | 0.5 | 95.6 | 1.4 | 2.0 | - | 0.2 | 100.0 |
| SNNP | Frequency | 56,715 | 17,946 | 2,528,205 | 11,242 | 261,650 | 873 | - | 2,876,631 |
| | % | 2.0 | 0.6 | 87.9 | 0.4 | 9.1 | - | - | 100.0 |
| Gambella | Frequency | 141 | 141 | 75,810 | - | 9,167 | - | 591 | 85,850 |
| | % | 0.2 | 0.2 | 88.3 | - | 10.7 | - | 0.7 | 100.0 |
| Harari | Frequency | - | 1,427 | 109,490 | 10,664 | 29,669 | - | - | 151,250 |
| | % | - | 0.9 | 72.4 | 7.1 | 19.6 | - | - | 100.0 |
| A. Ababa | Frequency | 109,973 | 75,891 | 966,604 | 57,701 | 6,334 | 8,228 | 10,511 | 1,235,242 |
| | % | 8.9 | 6.1 | 78.3 | 4.7 | 0.5 | 0.7 | 0.9 | 100.0 |
| D. Dawa | Frequency | 3,491 | 2,272 | 121,009 | 9,537 | 90,091 | - | - | 226,400 |
| | % | 1.5 | 1.0 | 53.5 | 4.2 | 39.8 | - | - | 100.0 |
| Total | Frequency | 280,167 | 305,384 | 11,234,620 | 346,741 | 3,524,002 | 10,051 | 29,018 | 15,729,983 |
| | % | 1.8 | 1.9 | 71.4 | 2.2 | 22.4 | 0.1 | 0.2 | 100.0 |
| Rural | Frequency | 104,317 | 36,817 | 9,181,166 | 145,468 | 3,300,849 | - | 14,622 | 12,783,239 |
| | % | 0.8 | 0.3 | 71.8 | 1.1 | 25.8 | - | 0.1 | 100.0 |
| Urban | Frequency | 175,850 | 268,567 | 2,053,454 | 201,273 | 223,153 | 10,051 | 14,396 | 2,946,744 |
| | % | 6.0 | 9.1 | 69.7 | 6.8 | 7.6 | 0.3 | 0.5 | 100.0 |

⁷ Non-improved facility includes flush/pour flush not to sewer/septic tank/pit latrine, pit latrine without slab/open pit, bucket, hanging toilet/hanging latrine, no facility/bush/field. (CSA 2014: Ethiopia: Mini Demographic and Health Survey 2014.)

There is significant regional disparity in accessing an improved toilet facility, ranging between 0.52% in Afar and 19.7% in Addis Ababa. The following figure graphs the regional disparity from the countrywide average figure for access to improved toilet facility. Use of improved toilet facility in Afar, Amhara, Oromia, BG, SNNP, and Gambella regional states is below the countrywide average.

Figure 2.2 Regional Disparity in Access to Improved Toilet Facility



Source: Table 2.11

Access to improved toilet facilities varies by urban versus rural areas. About 21.9% of the urban populations use improved toilet facilities (shared and not shared), where this is true for only 2.25% of the population in rural area (for details see Table 2.10). The DHS 2014 and 2016 survey estimate for access to improved toilet facilities was higher than this survey findings (45.5% in urban and 3.5% in rural areas in 2014 and 50.5% in urban and 5.7% in rural in 2016)) Significant numbers of people still uses bush/field in both urban areas (7.6%) and in rural areas (25.8%). The 2014 DHS estimated the proportion using bush/field to be as 8.7% in urban areas (6.9 in 2016 DHS) and 37.9% in rural areas (38.8% in 2016 DHS). This leaves a strong message that there is still a lot to work to improve access to improved toilet facilities.

Access to improved water is another household amenity about which the survey collected information. As per the definition of WHO and UNICEF, improved source of water includes piped source within the dwelling, yard, or plot; a public tap/standpipe; borehole; a protected well; a protected spring; and rainwater (WHO and UNICEF, 2010 as quoted by CSA, 2014:7-8)⁸. Based on this definition, and as presented in Table 2.12, about 65.7% of the population has access to improved water sources. This is almost the same with the 2016 DHS survey, which is 64.8% and significantly higher than the DHS estimate in 2014, which was 50.3%.

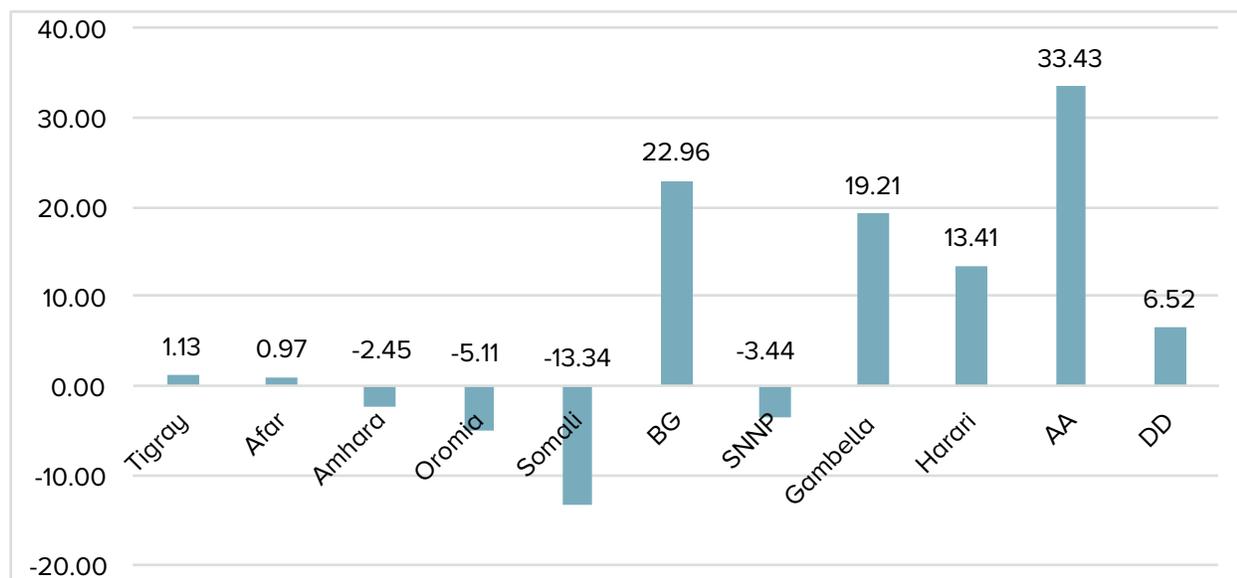
⁸ CSA 2014:Ethiopia:Mini Demographic and Health Survey 2014.

Table 2.12 Main Source of Drinking Water by Region and Residence (%)

| Region | | Piped into residence | Piped into the compound or plot | Public well | Public tap | Well/borehole with pump in the compound | Rainwater collection | Well without hand pump | Pond/ River/ Stream/ Dam | Protected spring | Unprotected spring | Rock catchment | Others |
|----------|-----------|----------------------|---------------------------------|-------------|------------|---|----------------------|------------------------|--------------------------|------------------|--------------------|----------------|---------|
| Tigray | Frequency | 4,105 | 225,980 | 169,613 | 13,475 | 167,025 | 0.00 | 20,200 | 67,784 | 126,547 | 196,382 | 2,934 | 63,880 |
| | % | 0.39 | 21.36 | 16.03 | 1.27 | 15.79 | 0.00 | 1.91 | 6.41 | 11.96 | 18.56 | 0.28 | 6.04 |
| Afar | Frequency | 1,910 | 34,479 | 62,296 | 7,720 | 1,333 | 12,639 | 252 | 29,363 | 487 | 26,574 | 487 | 3,827 |
| | % | 1.05 | 19.01 | 34.35 | 4.26 | 0.73 | 6.97 | 0.14 | 16.19 | 0.27 | 14.65 | 0.27 | 2.11 |
| Amhara | Frequency | 11,159 | 311,664 | 770,186 | 153,084 | 498,440 | 5,238 | 92,763 | 493,000 | 653,294 | 801,241 | 0.00 | 10,931 |
| | % | 0.29 | 8.20 | 20.26 | 4.03 | 13.11 | 0.14 | 2.44 | 12.97 | 17.19 | 21.08 | 0.00 | 0.29 |
| Oromia | Frequency | 37,594 | 390,024 | 1,306,062 | 134,418 | 533,130 | 26,603 | 102,639 | 536,862 | 909,542 | 1,338,321 | 109,048 | 86,186 |
| | % | 0.68 | 7.08 | 23.70 | 2.44 | 9.67 | 0.48 | 1.86 | 9.74 | 16.51 | 24.29 | 1.98 | 1.56 |
| Somali | Frequency | 2,493 | 16,274 | 94,317 | 41,221 | 28,667 | 18,146 | 17,221 | 96,646 | 7,212 | 42,642 | 1,840 | 31,460 |
| | % | 0.63 | 4.09 | 23.69 | 10.35 | 7.20 | 4.56 | 4.33 | 24.27 | 1.81 | 10.71 | 0.46 | 7.90 |
| B.Gumuz | Frequency | 565 | 52,070 | 44,464 | 1,820 | 79,109 | 285 | 2,084 | 13,734 | 4,059 | 7,560 | 0.00 | 0.00 |
| | % | 0.27 | 25.31 | 21.61 | 0.88 | 38.45 | 0.14 | 1.01 | 6.68 | 1.97 | 3.67 | 0.00 | 0.00 |
| SNNP | Frequency | 11,430 | 202,084 | 1,017,750 | 30,029 | 44,008 | 10,943 | 10,512 | 249,020 | 473,694 | 814,483 | 12,378 | 300 |
| | % | 0.40 | 7.03 | 35.38 | 1.04 | 1.53 | 0.38 | 0.37 | 8.66 | 16.47 | 28.31 | 0.43 | 0.01 |
| Gambella | Frequency | 1,180 | 15,881 | 9,836 | 1,209 | 4,150 | | 687 | 1,370 | 40,619 | 9,449 | 0.00 | 1,469 |
| | % | 1.37 | 18.50 | 11.46 | 1.41 | 4.83 | 0.00 | 0.80 | 1.60 | 47.31 | 11.01 | 0.00 | 2.00 |
| Harari | Frequency | | 71,920 | 10,010 | 3,464 | 34,220 | 0.00 | 18,013 | 0.00 | 0.00 | 0.00 | 0.00 | 13,623 |
| | % | 0.00 | 47.55 | 6.62 | 2.29 | 22.62 | 0.00 | 11.91 | 0.00 | 0.00 | 0.00 | 0.00 | 9.01 |
| A. Ababa | Frequency | 44,741 | 1,006,203 | 170,209 | 2,927 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 11,162 |
| | % | 3.62 | 81.46 | 13.78 | 0.24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| D. Dawa | Frequency | 1,224 | 60,899 | 64,228 | 0.00 | 22,000 | 0.00 | 3,525 | 13,832 | 15,071 | 26,196 | 0.00 | 19,425 |
| | % | 0.54 | 26.90 | 28.37 | 0.00 | 9.72 | 0.00 | 1.56 | 6.11 | 6.66 | 11.57 | 0.00 | 9.00 |
| Total | Frequency | 116,401 | 2,387,478 | 3,718,971 | 389,367 | 1,412,082 | 73,854 | 267,896 | 1,501,611 | 2,230,525 | 3,262,848 | 126,687 | 242,263 |
| | % | 0.74 | 15.18 | 23.64 | 2.48 | 8.98 | 0.47 | 1.70 | 9.55 | 14.18 | 20.74 | 0.81 | 1.54 |
| Rural | Frequency | 13,218 | 221,367 | 3,333,231 | 351,315 | 1,390,897 | 62,458 | 245,648 | 1,430,037 | 2,217,303 | 3,238,780 | 126,019 | 152,966 |
| | % | 0.1 | 1.73 | 26.08 | 2.75 | 10.88 | 0.49 | 1.92 | 11.19 | 17.35 | 25.34 | 0.99 | 1.2 |
| Urban | Frequency | 103,183 | 2,166,111 | 385,740 | 38,052 | 21,185 | 11,396 | 22,248 | 71,574 | 13,222 | 24,068 | 668 | 89,297 |
| | % | 3.5 | 73.51 | 13.09 | 1.29 | 0.72 | 0.39 | 0.76 | 2.43 | 0.45 | 0.82 | 0.02 | 3.03 |

While the average figure for access to an improved water source is improving, there continues to be wide regional variation. For instance, in Somali region, access to improved water sources is only 52.3% while it is 99.1% in Addis Ababa. The following figure graphs the regional disparity from the countrywide average figure for access to improved sources of water. Access to improved sources of water is below the national average in Amhara, Oromia, Somali, and SNNP regional states.

Figure 2.3 Regional Disparity in Access to Improved Source of Water



Access to improved sources of water varies by urban versus rural areas (see table 2.12). For instance, while almost all urban populations obtain their drinking water from improved sources (93.0%) the corresponding figure for rural populations is only 59.4%. The 2014 DHS estimates are almost the same for the urban areas (93.2%) but the DHS estimate for rural populations is significantly different than our findings, with rural populations estimated at 43.8%. The most commonly accessed source of safe water for urban populations in this HH survey is piped water, which accounts for 77.1% of urban populations (3.5% piped into residence and 73.51% piped into compound/plot).

Households are using a variety of sources for household energy. The main source of household energy in the country is firewood. About 82.5% of sampled households use firewood as the main source of energy for cooking. This is followed by charcoal (8.1%) and electricity (6.2%). Households in Amhara, Oromia and SNNP regions have the highest use of firewood; over 90% of households use firewood as their main source of energy for cooking. All other regions are below the national average figure.

Access to sources of energy varies by residence in urban and rural areas (see table 2.13). For instance, while almost all rural households use firewood as main source of energy for cooking (95.8%), the corresponding figure for urban households was only 24.57%. The urban population is increasingly using electricity for cooking – 32.5% of urban populations in this survey reported using electricity, compared to only 18.3% in the last HH survey (2010/11).

Table 2.13 Main source of energy for cooking by region and residence (%)

| Region | | Fire-wood | Charcoal | Kerosine | Gas | Electricity | Solar | Other | Total |
|----------|-----------|------------|-----------|----------|-------|-------------|--------|---------|------------|
| Tigray | Frequency | 766,472 | 164,007 | 5,945 | - | 90,646 | - | 30,855 | 1,057,925 |
| | % | 72.5 | 15.5 | 0.6 | - | 8.6 | - | 2.9 | 100.0 |
| Afar | Frequency | 143,770 | 35,996 | - | - | 1,270 | - | 331 | 181,367 |
| | % | 79.3 | 19.9 | - | - | 0.7 | - | 0.2 | 100.0 |
| Amhara | Frequency | 3,459,805 | 138,199 | 2,468 | - | 47,747 | 6,537 | 146,244 | 3,801,000 |
| | % | 91.0 | 3.6 | 0.1 | - | 1.3 | 0.2 | 3.9 | 100.0 |
| Oromia | Frequency | 5,055,655 | 214,295 | 6,695 | - | 102,702 | 3,046 | 128,036 | 5,510,429 |
| | % | 91.8 | 3.9 | 0.1 | - | 1.9 | 0.1 | 2.3 | 100.0 |
| Somali | Frequency | 290,409 | 70,159 | 399 | - | 7,020 | 1,209 | 28,943 | 398,139 |
| | % | 72.9 | 17.6 | 0.1 | - | 1.8 | 0.3 | 7.3 | 100.0 |
| B.Gumuz | Frequency | 162,607 | 37,052 | 1,174 | - | 4,477 | - | 440 | 205,750 |
| | % | 79.0 | 18.0 | 0.6 | - | 2.2 | - | 0.2 | 100.0 |
| SNNP | Frequency | 2,713,642 | 121,056 | 3,937 | - | 21,037 | 2,515 | 14,444 | 2,876,631 |
| | % | 94.3 | 4.2 | 0.1 | - | 0.7 | 0.1 | 0.5 | 100.0 |
| Gambella | Frequency | 63,134 | 19,578 | 229 | - | 141 | - | 2,768 | 85,850 |
| | % | 73.5 | 22.8 | 0.3 | - | 0.2 | - | 3.2 | 100.0 |
| Harari | Frequency | 74,260 | 45,868 | 11,569 | 1,427 | 14,361 | - | 3,765 | 151,250 |
| | % | 49.1 | 30.3 | 7.7 | 0.9 | 9.5 | - | 2.5 | 100.0 |
| A. Ababa | Frequency | 70,979 | 396,798 | 66,243 | 6,554 | 682,651 | - | 12,017 | 1,235,242 |
| | % | 5.8 | 32.1 | 5.4 | 0.5 | 55.3 | - | 1.0 | 100.0 |
| D. Dawa | Frequency | 171,390 | 35,216 | 5,878 | - | 9,803 | 318 | 3,795 | 226,400 |
| | % | 75.7 | 15.6 | 2.6 | - | 4.3 | 0.1 | 1.7 | 100.0 |
| Total | Frequency | 12,972,123 | 1,278,224 | 104,537 | 7,981 | 981,855 | 13,625 | 371,638 | 15,729,983 |
| | % | 82.5 | 8.1 | 0.7 | 0.1 | 6.2 | 0.1 | 2.4 | 100.0 |
| Rural | Frequency | 12,248,131 | 181,366 | 9,508 | - | 25,015 | 12,098 | 307,121 | 12,783,239 |
| | % | 95.8 | 1.4 | 0.1 | - | 0.2 | 0.1 | 2.4 | 100.0 |
| Urban | Frequency | 723,992 | 1,096,858 | 95,029 | 7,981 | 956,840 | 1,527 | 64,517 | 2,946,744 |
| | % | 24.6 | 37.2 | 3.2 | 0.3 | 32.5 | 0.1 | 2.2 | 100.0 |

2.7 Ownership of land, household consumption and income

In addition to the demographic characteristics, housing infrastructure and related amenities, the survey collected data on land ownership, income and expenditure. Table 2.14 presents land ownership. Generally, people own relatively small parcels of land, if they own any land at all. As can be observed in Table 2.14, 73.6% of the population has less than one hectare (including those who do not own any land). Only 10.0% of the population own greater than 2 hectares of land.

Table 2.14 Land Ownership in Hectare by Region and Residence (%)

| Region | | Less than 0.1 | 0.10-0.50 | 0.51-1.00 | 1.01-2.00 | 2.01-5.00 | 5.01-10.00 | Total |
|----------|-----------|---------------|-----------|-----------|-----------|-----------|------------|------------|
| Tigray | Frequency | 328,007 | 341,345 | 270,743 | 90,550 | 25,544 | 2,607 | 1,058,796 |
| | % | 31.0 | 32.2 | 25.6 | 8.6 | 2.4 | 0.3 | 100 |
| Afar | Frequency | 165,159 | - | 8,043 | 5,064 | 2,828 | 273 | 181,367 |
| | % | 91.1 | - | 4.4 | 2.8 | 1.6 | 0.2 | 100 |
| Amhara | Frequency | 549,917 | 1,215,432 | 1,150,570 | 722,673 | 158,181 | 4,828 | 3,801,601 |
| | % | 14.5 | 32.0 | 30.3 | 19.0 | 4.2 | 0.1 | 100 |
| Oromia | Frequency | 792,270 | 1,345,624 | 1,229,014 | 1,117,213 | 924,671 | 107,978 | 5,516,770 |
| | % | 14.4 | 24.4 | 22.3 | 20.3 | 16.8 | 2.0 | 100 |
| Somali | Frequency | 181,382 | 23,625 | 73,378 | 64,073 | 46,360 | 9,321 | 398,139 |
| | % | 45.6 | 5.9 | 18.4 | 16.1 | 11.6 | 2.3 | 100 |
| B.Gumuz | Frequency | 72,485 | 10,882 | 30,465 | 41,009 | 44,167 | 6,742 | 205,750 |
| | % | 35.2 | 5.3 | 14.8 | 19.9 | 21.5 | 3.3 | 100 |
| SNNP | Frequency | 413,215 | 870,782 | 879,602 | 495,371 | 212,456 | 5,205 | 2,876,631 |
| | % | 14.4 | 30.3 | 30.6 | 17.2 | 7.4 | 0.2 | 100 |
| Gambella | Frequency | 35,353 | 15,241 | 14,233 | 10,811 | 9,919 | 293 | 85,850 |
| | % | 41.2 | 17.8 | 16.6 | 12.6 | 11.6 | 0.3 | 100 |
| Harari | Frequency | 78,882 | 7,721 | 36,869 | 21,838 | 5,940 | - | 151,250 |
| | % | 52.2 | 5.1 | 24.4 | 14.4 | 3.9 | - | 100 |
| A. Ababa | Frequency | 1,113,293 | 3,312 | 118,637 | - | - | - | 1,235,242 |
| | % | 90.1 | 0.3 | 9.6 | - | - | - | 100 |
| D. Dawa | Frequency | 87,087 | 78,252 | 49,742 | 9,574 | 2,976 | 485 | 228,116 |
| | % | 38.2 | 34.3 | 21.8 | 4.2 | 1.3 | 0.2 | 100 |
| Total | Frequency | 3,817,050 | 3,912,216 | 3,861,296 | 2,578,176 | 1,433,042 | 137,732 | 15,739,512 |
| | % | 24.3 | 24.9 | 24.5 | 16.4 | 9.1 | 0.9 | 100 |

Land ownership in rural areas is more meaningful than for urban populations, as farming is the major rural livelihood. As presented in Table 2.14, it is 40.05% of rural residents that have up to half a hectare to farm and generate their main food/income for the family. About 68.5% of rural residents have up to one hectare. Given the agricultural context where modern technology is limited and various structural and institutional problems exist, the size of landholding is generally not sufficient for a family to produce enough food, even during years of good rainfall.

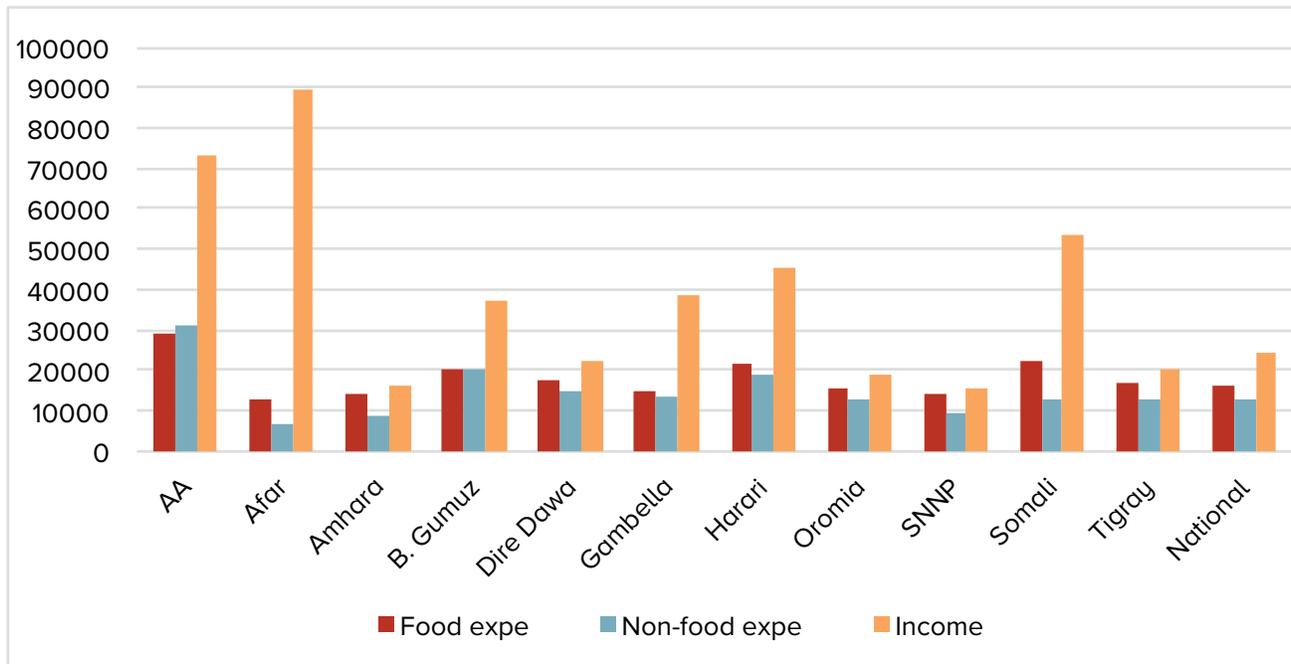
The household income and expenditure data available from this survey creates an estimate built from respondents reporting of different kinds of expenditure and income for different recall periods. The average annual income per capita in the country according to this survey is 24,227 ETB ranging from 89,337 ETB in Afar region to 15,213 ETB in SNNP region. The per capita income in Amhara, Dire Dawa, Oromia, and Tigray regions is less than the national average (see Table 2.15). Expenditure is expected to be the mirror of income. However, according to Table 2.15, on average nationally, household expenditure is 109% of their income. Household food and non-food expenditure per annum at country level is 29,310 ETB. The average total expenditure ranges between 60,033 birr in Addis Ababa and 20,084 in Afar region. Average expenditure is more than income in most regions, including the national average. The only exceptions are Somali, Afar, Addis Ababa, Gambella, and Harari regions. Of household's expenditure, approximately 56% is spent on food, while the remaining 46% is non-food expenditure. The proportion of expenditure on food does not vary greatly region to region, it ranges from 49% in Addis Ababa and Benishangul Gumuz, to 65% in Afar region.

Table 2.15 Household Consumption Expenditure and Income by Region (ETB)

| Region | Stat | Food consumption expenditure | Non-food consumption Expenditure | Total expenditure | Income | Average expenditure as percent of income | Average food Expenditure as percent of total expenditure |
|-----------------|-------------|------------------------------|----------------------------------|-------------------|----------------|--|--|
| Addis Ababa | Mean | 29,156 | 30,878 | 60,033 | 73,158 | 82% | 49% |
| | SD | 20,177 | 34,806 | 47,138 | 173,768 | | |
| Afar | Mean | 13,106 | 6,978 | 20,084 | 89,337 | 22% | 65% |
| | SD | 12,360 | 8,416 | 19,470 | 649,712 | | |
| Amhara | Mean | 14,077 | 8,753 | 22,830 | 16,130 | 142% | 62% |
| | SD | 10,916 | 8,630 | 16,286 | 39,665 | | |
| B. Gumuz | Mean | 20,160 | 20,628 | 40,788 | 37,030 | 110% | 49% |
| | SD | 18,408 | 42,338 | 51,977 | 76,903 | | |
| Dire Dawa | Mean | 17,377 | 14,811 | 32,188 | 22,642 | 142% | 54% |
| | SD | 9,466 | 14,853 | 20,486 | 29,003 | | |
| Gambella | Mean | 14,909 | 13,283 | 28,192 | 38,917 | 72% | 53% |
| | SD | 11,859 | 32,659 | 39,935 | 84,416 | | |
| Harari | Mean | 21,700 | 18,831 | 40,531 | 45,478 | 89% | 54% |
| | SD | 16,405 | 18,912 | 28,701 | 69,034 | | |
| Oromia | Mean | 15,697 | 12,869 | 28,566 | 18,852 | 152% | 55% |
| | SD | 10,356 | 21,083 | 25,807 | 29,507 | | |
| SNNP | Mean | 14,492 | 9,473 | 23,965 | 15,243 | 157% | 60% |
| | SD | 10,234 | 11,613 | 18,201 | 19,297 | | |
| Somali | Mean | 22,353 | 12,713 | 35,066 | 53,721 | 65% | 64% |
| | SD | 18,635 | 23,504 | 33,757 | 309,793 | | |
| Tigray | Mean | 17,052 | 13,129 | 30,182 | 20,020 | 151% | 56% |
| | SD | 11,946 | 26,972 | 33,790 | 32,875 | | |
| National | Mean | 16,508 | 12,802 | 29,310 | 24,227 | 121% | 56% |
| | SD | 12,767 | 20,640 | 28,184 | 104,658 | | |

As is vividly clear from Figure 2.4 below, the two emerging regions are the highest in terms of average income compared with most developed regions (the exception is Addis Ababa). Hypothetically, the high incomes reported in Afar and Somali regions are attributed to a high level of livestock sales (particularly camels).

Figure 2.4 Mean consumption expenditure and income in Birr



Chapter 3. Household Self-Reported Health Status and Mortality

3.1 Self-Reported Health Status

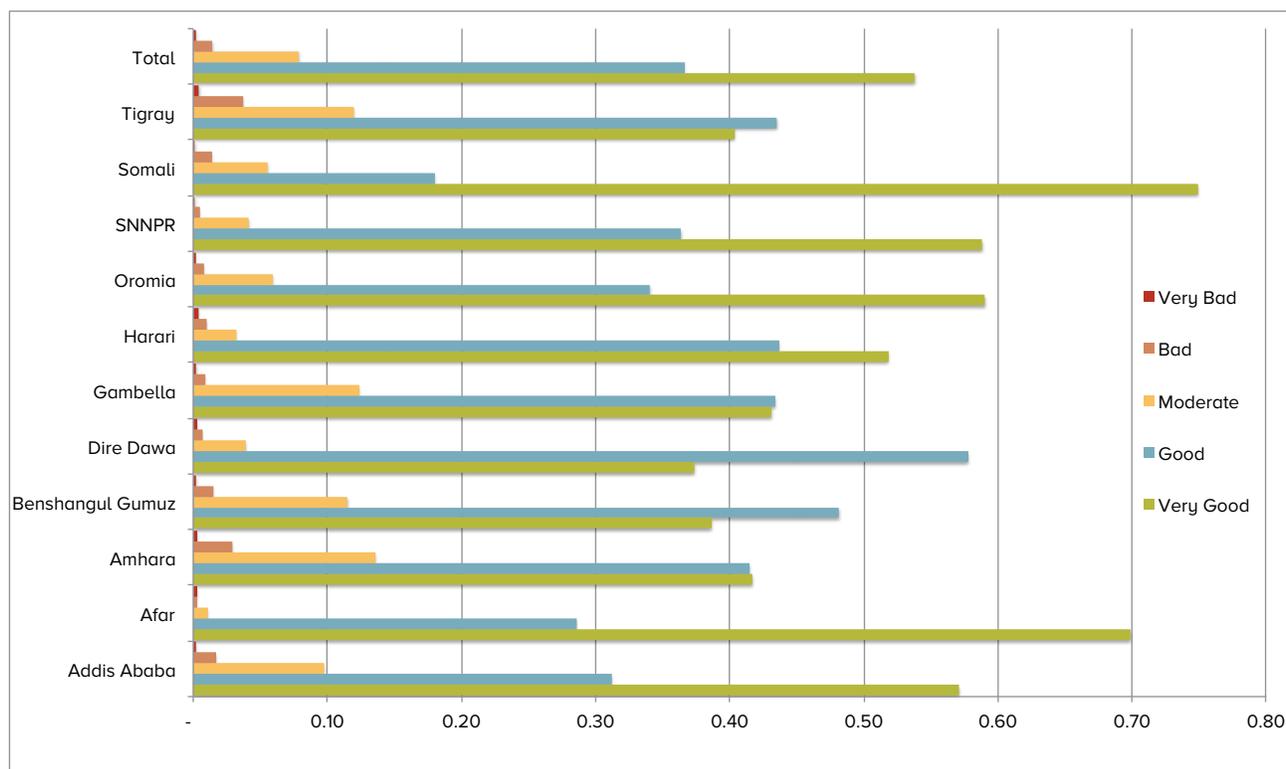
Respondents were asked to assess the general health status of each member of their household, compared with their peers. Respondents rated each member's health status from one to five - one showing the worst or 'very bad' health status and five being the best or 'very good' health status. This rank is similar to the five-point Likert scale of self-rated health, which is strongly correlated with objective health status and is considered to be a robust predictor of mortality (Idler EL, Benyamini 1997; Baron-Epel O., 2014). Table 3.1 shows the self-reported health status of household members as evaluated by the respondents. Overall, 90.4% of the population viewed their general health status as 'good' or 'very good'. On the other hand, the self-reported health status was perceived as 'bad' or 'very bad' for just 1.6% of the population.

Table 3.1: Self-Reported General Health Status

| | Very Good (%) | Good (%) | Moderate (%) | Bad (%) | Very Bad (%) | Don't Know (%) |
|-------------------------|---------------|--------------|--------------|-------------|--------------|----------------|
| Gender | | | | | | |
| Male | 55.92 | 35.6 | 7.02 | 1.22 | 0.22 | 0.02 |
| Female | 51.38 | 37.8 | 8.90 | 1.70 | 0.20 | 0.02 |
| Residence | | | | | | |
| Urban | 59.19 | 31.02 | 8.04 | 1.58 | 0.14 | 0.03 |
| Rural | 52.85 | 37.61 | 7.87 | 1.43 | 0.22 | 0.02 |
| Wealth quintiles | | | | | | |
| Poorest | 49.43 | 39.14 | 9.24 | 1.88 | 0.28 | 0.04 |
| Q2 | 52.85 | 37.01 | 8.47 | 1.44 | 0.23 | - |
| Q3 | 52.99 | 37.92 | 7.54 | 1.34 | 0.19 | 0.02 |
| Q4 | 56.50 | 35.54 | 6.51 | 1.22 | 0.20 | 0.03 |
| Richest | 58.66 | 32.30 | 7.56 | 1.33 | 0.13 | 0.02 |
| Total | 53.77 | 36.65 | 7.9 | 1.46 | 0.21 | 0.02 |

Based on the assessment of respondents, the self-reported health status appears to be slightly better among males than females, and among urban than rural residents. Similarly, self-reported health status is perceived to be slightly better among households in the richest wealth quintile compared with those in the poorest quintile. There is considerable regional variation on self-reported general health status. For example, health status was assessed as 'very good' for 75% of individuals in Somali region (the highest rate) compared with 37% of individuals in Dire Dawa (the lowest rate) (see Figure 3.1).

Figure 3.1: Self-Reported General Health Status by Region (%)



% refers to percentage of weighted population

3.2 Self-Reported General Illnesses

Table 3.2 shows the percentage of individuals who reported being ill over the four weeks preceding the survey (respondents reported for each individual in his or her household). Overall, 10% of individuals reported being ill in the four weeks preceding the survey, a slight decrease from the last survey where 11.5% of the population reported an illness in the last four weeks (see Table 3.2). The prevalence of illness varied between male and female populations, urban and rural areas, as well as across regions. Self-reported illness was marginally higher among females (10.8%) than males (9.3%), and in urban settings (11.1%) than in rural areas (9.9%). Higher rates of self-reported illness among females and urban residents were also documented by previous surveys (FMOH 2014; CSA 2012).

Table 3.2 presents the prevalence of self-reported illnesses by region and sex. Self-reported illness varied across regions and within a region by sex. The highest rate of self-reported illness was reported in Benishangul Gumuz region (20.5%), followed by Gambella (16.8%) and Tigray (13.2%). Dire Dawa had the lowest prevalence of self-reported illness (6.5%), followed by Harari (7.5%).

Table 3.2 Self-Reported Illness by Sex and Place of Residence and Region

| | % of individuals who were ill in the last 4 weeks preceding survey | | |
|-------------------|--|--------------|--------------|
| | Male | Female | Total |
| Rural | 9.2 | 10.6 | 9.87 |
| Urban | 10.1 | 11.96 | 11.05 |
| Total | 9.32 | 10.81 | 10.05 |
| Residence | | | |
| Addis Ababa | 10.79 | 12.55 | 11.73 |
| Afar | 8.24 | 10.35 | 9.24 |
| Amhara | 11.86 | 12.72 | 12.29 |
| Benishangul Gumuz | 19.16 | 21.93 | 20.52 |
| Dire Dawa | 6.04 | 7.06 | 6.54 |
| Gambella | 15.69 | 17.97 | 16.82 |
| Harari | 7.91 | 7.49 | 7.51 |
| Oromia | 7.52 | 9.24 | 8.35 |
| SNNPR | 8.43 | 9.48 | 8.92 |
| Somali | 8.99 | 11.75 | 10.28 |
| Tigray | 12.00 | 14.16 | 13.20 |
| Total | 9.32 | 10.81 | 10.05 |

Figure 3.2 shows the association between household wealth status and self-reported illnesses. Individuals in the lowest wealth quintile households were slightly more likely to report illness, but were less likely to visit a health facility (see health seeking behavior in Chapter 4 below). In contrast to the result of this report, the previous survey did not find a clear or significant association between wealth status and self-reported illness (See FMOH 2014, pp.31-32). Figure 3.2 also shows that individuals in the richest wealth quintile households were marginally more likely to report illness compared with those in the second to fourth quintiles, hypothetically due to increasing chronic conditions or greater awareness of signs of illness and earlier recognition of illness among the rich.

Figure 3.2 Self-Reported Illness by Wealth Status

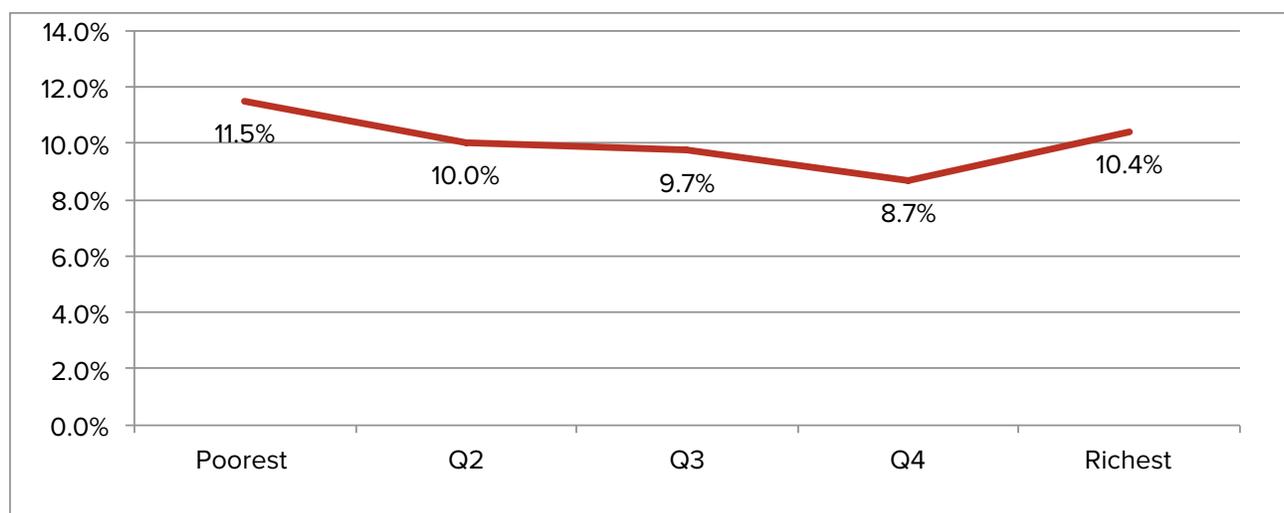
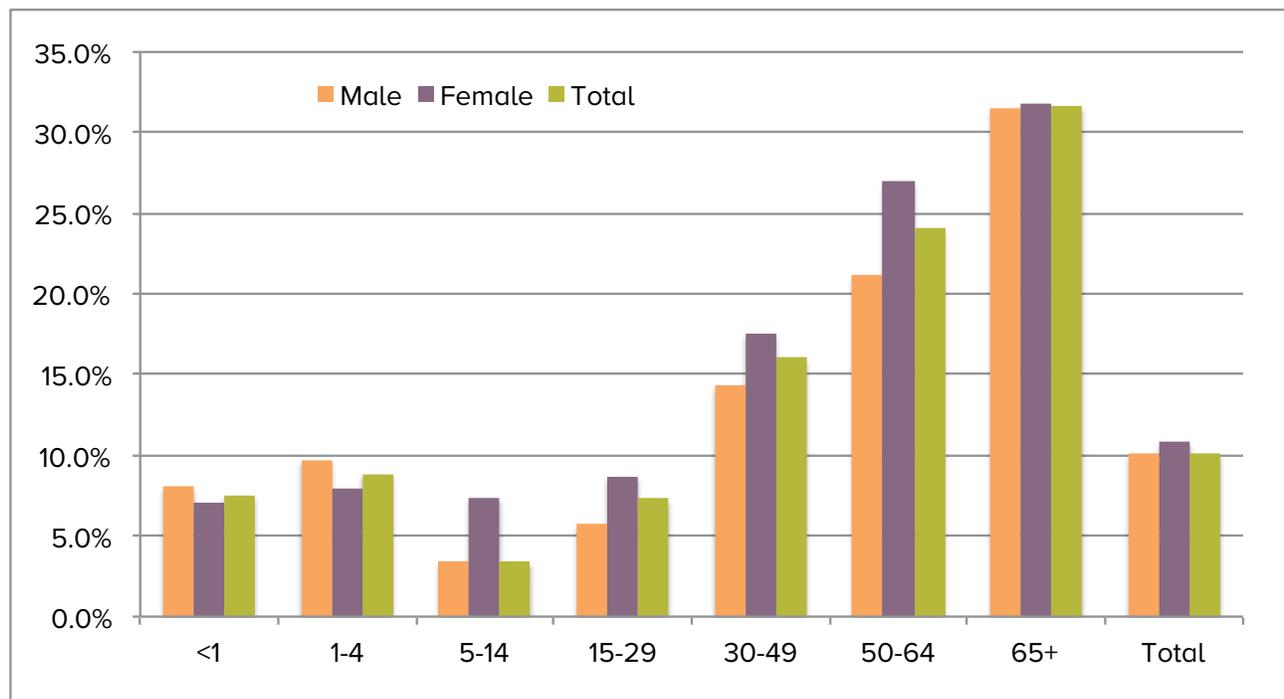


Figure 3.3 depicts the relationships between age and self-reported illness. A generally positive association can be observed between age and reported incidence of illness for both males and females, as shown in Figure 3.3. A closer look at this relationship shows that 10% or less of the younger population (aged <30) reported an illness, while a higher and increasing rate of self-reported illnesses was observed among older populations.'

Figure 3.3 Self-Reported Illness by Age (Years) and Sex



3.3 Self-Reported Chronic Illnesses

The survey sought to understand the prevalence of self-reported chronic illnesses among the population, and asked respondents whether any member of their household has chronic conditions such as hypertension, diabetes, cardiac disorder, mental illness, cancer, etc. over the past year. Table 3.3 presents the prevalence of self-reported chronic illnesses among the population. Overall, 11% of the population reported having at least one chronic condition. Men reported a higher prevalence of self-reported chronic illnesses (12.9%) than women (9.4%). The prevalence of self-reported chronic illnesses has increased substantially since the last survey, in which it was reported to be 5.2% for males and 5.9% for females (FMOH 2014). This increase was particularly significant among male populations. As expected, self-reported chronic illnesses were more common in urban settings than rural areas. In four regions (Amhara, Benishangul Gumuz, Gambella and Tigray), however, the prevalence of self-reported chronic illnesses even in rural areas was high compared with other regions, and in some cases was about as high as the prevalence reported in urban areas within the region (see Table 3.3). Further investigation is required to understand why the prevalence of chronic diseases is reported to be significantly higher in the rural areas of these regions.

Table 3.3 Self-Reported Chronic Illness by Sex, Residence and Region

| Region | Male | Female | Rural | Urban | Total |
|-------------------|--------------|-------------|-------------|--------------|--------------|
| Addis Ababa | 19.7% | 15.6% | - | 17.4% | 17.4% |
| Afar | 2.8% | 3.4% | 3.2% | 2.6% | 3.1% |
| Amhara | 21.3% | 14.0% | 17.7% | 17.8% | 17.7% |
| Benishangul Gumuz | 21.0% | 13.9% | 17.2% | 19.4% | 17.5% |
| Dire Dawa | 7.0% | 5.3% | 2.3% | 14.6% | 6.1% |
| Gambella | 17.1% | 15.4% | 16.1% | 16.7% | 16.2% |
| Harari | 7.8% | 7.5% | 2.9% | 13.2% | 7.6% |
| Oromia | 9.7% | 7.5% | 8.5% | 11.3% | 8.6% |
| SNNPR | 8.2% | 4.8% | 6.1% | 12.4% | 6.5% |
| Somali | 9.2% | 4.5% | 6.3% | 7.1% | 6.9% |
| Tigray | 14.2% | 14.5% | 14.4% | 14.2% | 14.4% |
| National | 12.9% | 9.4% | 9.5% | 14.2% | 11.1% |

% refers to prevalence of chronic diseases among the weighted population

3.4 Self-Reported Mortality

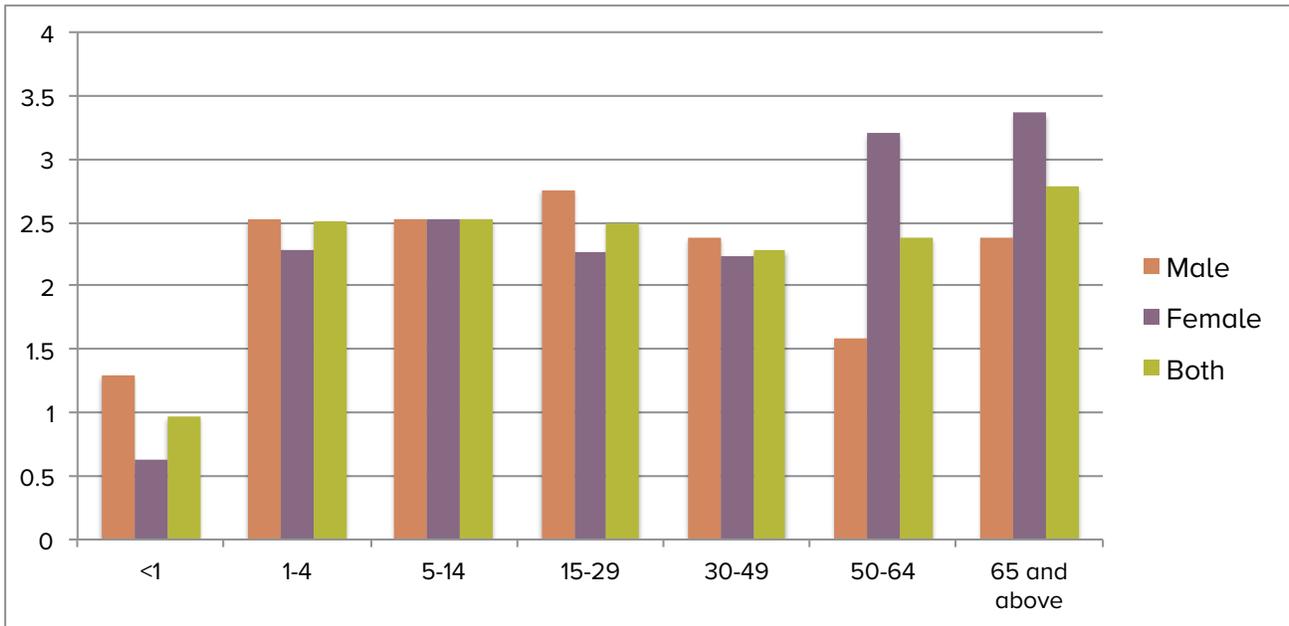
Table 3.4 shows the incidence of death of family members reported by households. As the table shows, 2.4% of households reported a death of at least one family member in the last 12 months, a substantial reduction from 4.2% of households who reported death of at least one family member in the last similar survey (in 2011/12).

Table 3.4 Reported Mortality by Geographic Location

| | | Percent of households reporting death of a family member in last 12 months |
|-------------------------|-------------------|--|
| Residence | | |
| | Rural | 2.33% |
| | Urban | 3.02% |
| | Total | 2.43% |
| Regions | | |
| | Addis Ababa | 3.23% |
| | Afar | 4.17% |
| | Amhara | 2.33% |
| | Benishangul Gumuz | 4.50% |
| | Dire Dawa | 0.47% |
| | Gambella | 3.81% |
| | Harari | 3.43% |
| | Oromia | 2.23% |
| | SNNPR | 1.82% |
| | Somali | 7.41% |
| | Tigray | 2.27% |
| Wealth quintiles | | |
| | Poorest | 2.49% |
| | Q2 | 2.35% |
| | Q3 | 3.09% |
| | Q4 | 1.87% |
| | Richest | 2.32% |
| Total | | 2.43% |

The reported deaths of family member vary across regions and residential areas. Afar, Benishangul Gumuz and Somali have a higher incidence of reported deaths compared to other regions. Particularly, incidence of death in Somali region was reported to be about 3 times higher than the national average, and nearly twice as high as reported in the last survey (in 2011/12). Notably, SNNP and Gambella regions had much higher than average incidence of death reported in the previous survey, and their rates have dropped significantly (from 5.8% to 1.8% in SNNP and from 8.6% to 3.8% in Gambella). A higher incidence of death was reported in urban centers (3.02%) than in rural areas (2.33%). On the other hand, differences in the incidence of mortality appear to be small among households in richer versus those in poorer wealth quintiles. The reported mortality rates were lower for infants (less than one year) and higher for persons aged greater than 64 years (Figure 3.4) compared to other age groups. The last survey showed a higher mortality rate among infants compared to other groups, which indicates a marked reduction in infant mortality in the last few years.

Figure 3.4: Age and Sex Distribution of the Deceased in the Last 12 Months



Chapter 4. Health Seeking Behavior and Health Service Utilization

4.1. Health Seeking Behavior

Table 4.1 shows the percentage of individuals who reported seeking care at a health facility over the four weeks preceding the survey. Overall, 52.9% of individuals who reported being ill sought care in the four weeks preceding the survey, a 10% drop from the figure reported in the last similar survey where 62.4% of the ill individuals reported seeking care (see Table 4.1).

Health seeking behavior varied between male and female populations, urban and rural areas, as well as across regions. The likelihood of seeking health care was marginally higher among females (53.2%) than males (52.3%), and significantly higher among individuals living in urban areas (67.4%) than those residing in rural areas (50.0%). While the latter result is consistent with the previous findings (CSA 2012; MOH 2014), a marginally higher rate of health seeking behavior among females than males in this survey appears to be a new development.

Table 4.1 Health Care Seeking Behavior by Sex, Place of Residence and Region (%)

| | | % of individuals who reported being ill who visited a health facility | | |
|------------------|-------------------|---|--------------|--------------|
| | | Male | Female | Total |
| Residence | | | | |
| | Rural | 49.49 | 50.32 | 49.95 |
| | Urban | 67.98 | 66.50 | 67.41 |
| | Total | 52.28 | 53.19 | 52.85 |
| Regions | | | | |
| | Addis Ababa | 77.11 | 70.35 | 73.50 |
| | Afar | 76.16 | 65.58 | 70.53 |
| | Amhara | 39.48 | 38.89 | 39.26 |
| | Benishangul Gumuz | 74.73 | 73.93 | 74.32 |
| | Dire Dawa | 69.64 | 49.64 | 59.01 |
| | Gambella | 50.50 | 62.40 | 56.81 |
| | Harari | 68.99 | 90.09 | 79.47 |
| | Oromia | 51.79 | 57.04 | 54.63 |
| | SNNPR | 59.80 | 58.74 | 59.33 |
| | Somali | 48.74 | 46.16 | 47.50 |
| | Tigray | 52.14 | 47.43 | 49.53 |
| | Total | 52.28 | 53.19 | 52.85 |

Health care seeking behavior was not uniform across regions, varying between the lowest rate of 39.3% in Amhara to the highest rate of 79.5% in Harari region, a finding consistent with the previous survey (FMOH 2014). A relatively low level of care seeking in Amhara region was reported by the previous NHA as well as at least one other study (Fitsum Girma et al. 2011). Regions with relatively lower rates of care seeking behavior include Somali (47.5%) and Tigray (49.5%), while those with higher rates of care seeking behavior include Benishangul Gumuz (74.3%) and Addis Ababa (73.5%) (See Table 4.1). These results suggest that proximity of health facilities is not the only factor that influences care seeking decisions. For example, high care seeking behavior was reported in Afar (70.5%), a region with a sparsely populated, predominantly pastoral population where one has to travel a longer distance to reach a health facility, whereas relatively lower care seeking behavior was reported in Dire Dawa City Council (59%), where a number of health facilities are readily available in relatively convenient locations. Further analysis is required to better understand factors affecting health-seeking decisions among regions.

Figure 4.1 shows the association between household wealth status and health seeking behavior. As described above, individuals in the lowest wealth quintile households were slightly more likely to report an illness, but they were less likely to visit a health facility (compare Figures 3.2 and 4.1). In this survey, a particularly clear positive association was observed between economic status (proxied by wealth quintile) and healthcare seeking behavior. This is in contrast to the previous survey, which found that individuals in the poorest households (those in the poorest wealth quintile) were more likely to seek curative care, which was contrary to expectation. In contrast to the result of the current report, the previous survey also did not find a clear or significant association between wealth status and self-reported illness (See FMOH 2014, pp.31-32).

Figure 4.1 Percent of Ill Who Sought Health Care by Wealth Status

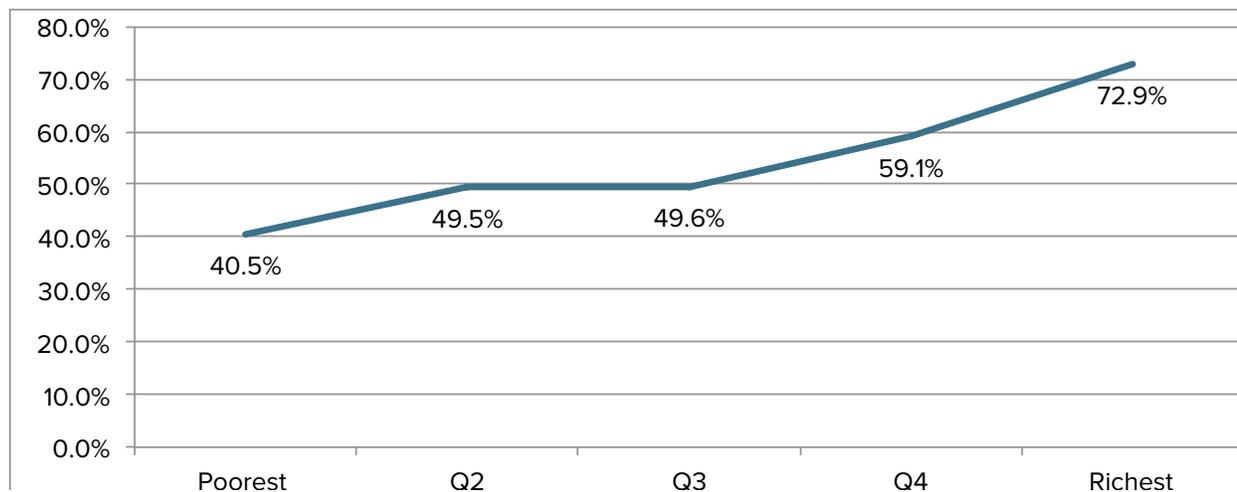
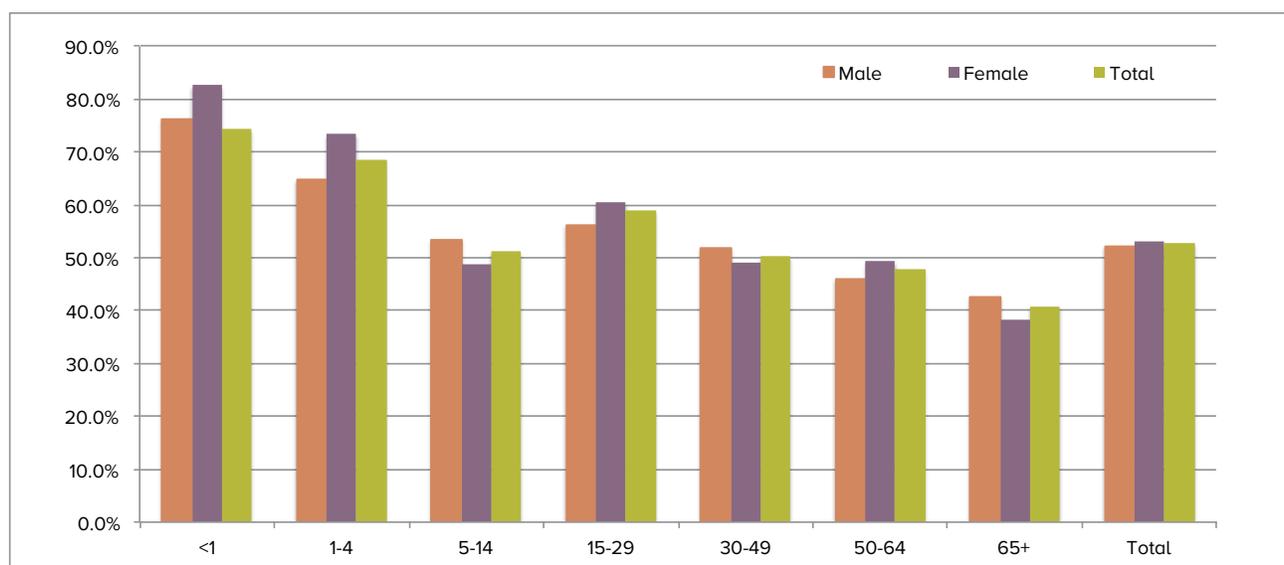


Figure 4.2 depicts the relationship between age and healthcare seeking behavior, which shows a clear inverse correlation. Interestingly, individuals in the age group that reported the highest incidence of illness (particularly individuals aged 65 years or older) were less likely to seek healthcare for both male and female populations (see Figure 3.3 above). A further investigation is required to understand why older people were less likely to seek care, despite carrying the highest burden of illnesses. While infants in this survey were reported to be less ill than other age groups, care was sought for their illnesses at a higher rate than other age groups, which is a positive sign, and is in-line with the reductions observed in infant mortality over the last several years (EDHS 2016)

Figure 4.2 Percent of Ill Individuals Who Reported Visiting a Health Facility by Age and Sex



4.1.1 Use of Health Care in an Emergency

Results from the assessment of the use of healthcare in an emergency – defined as having spent at least one night in a health facility in the 12 months prior to the survey - are presented in Table 4.3 for males and females by region. About 1.1% of the population reported use of healthcare in an emergency as defined above, which was slightly higher among females (1.2%) than males (1.0%). The largest rate of care utilization in an emergency was observed in Benishangul Gumuz region (2.34%), followed by Tigray (2.16%). Healthcare use in an emergency doubled from 0.55% in the last household survey (2011/12) to 1.1% in 2016. In both surveys, the lowest rate of health care utilization in an emergency was observed in Amhara region. Use of care in an emergency was higher in this survey among the rich than the poor for both males and females (see Table 4.3). Similarly, use of healthcare in an emergency was higher in urban than rural areas (see Figure 4.4).

Table 4.3 Percent of Ill Population who Reported Spending a Night in a Health Facility in the 12 Months Prior to the Survey

| Region | Male (%) | Female (%) | Total (%) |
|-------------------|-------------|-------------|-------------|
| Regions | | | |
| Addis Ababa | 1.38 | 1.78 | 1.60 |
| Afar | 0.82 | 0.19 | 0.52 |
| Amhara | 0.60 | 0.78 | 0.69 |
| Benishangul Gumuz | 1.78 | 2.95 | 2.35 |
| Dire Dawa | 1.69 | 1.14 | 1.42 |
| Gambella | 0.78 | 0.25 | 0.52 |
| Harari | 1.05 | 2.59 | 1.80 |
| Oromia | 1.00 | 1.09 | 1.04 |
| SNNPR | 0.87 | 1.08 | 0.98 |
| Somali | 1.56 | 2.18 | 1.86 |
| Tigray | 1.64 | 2.65 | 2.16 |
| Total | 0.98 | 1.22 | 1.10 |

Figure 4.3 Percent of People Who Reported Spending a Night in a Health Facility During the 12 Months Prior to the Survey by Wealth Status

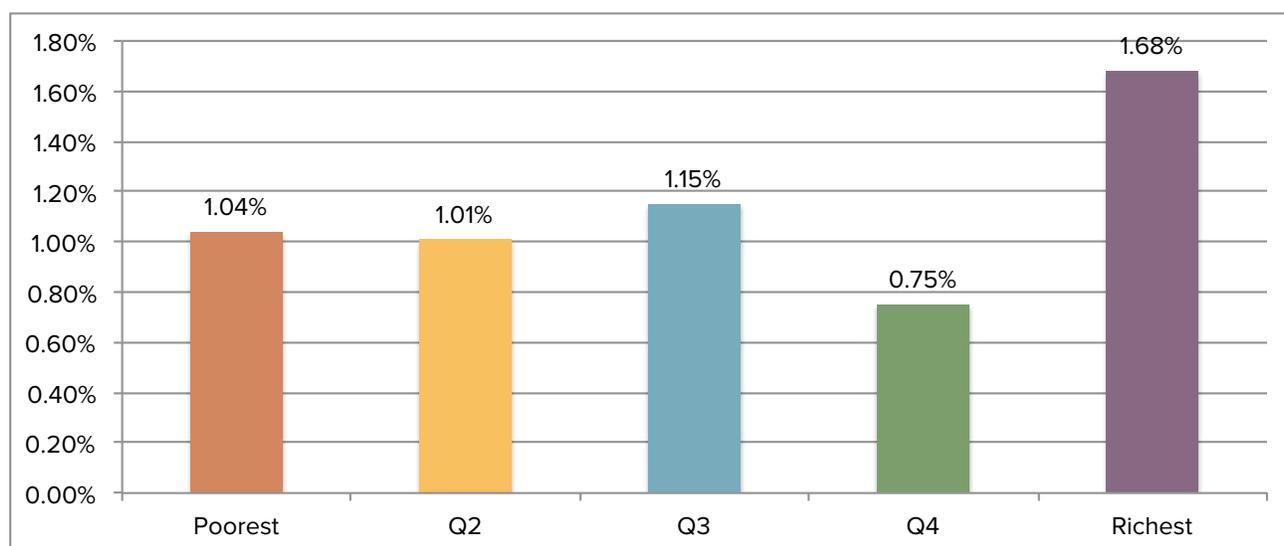
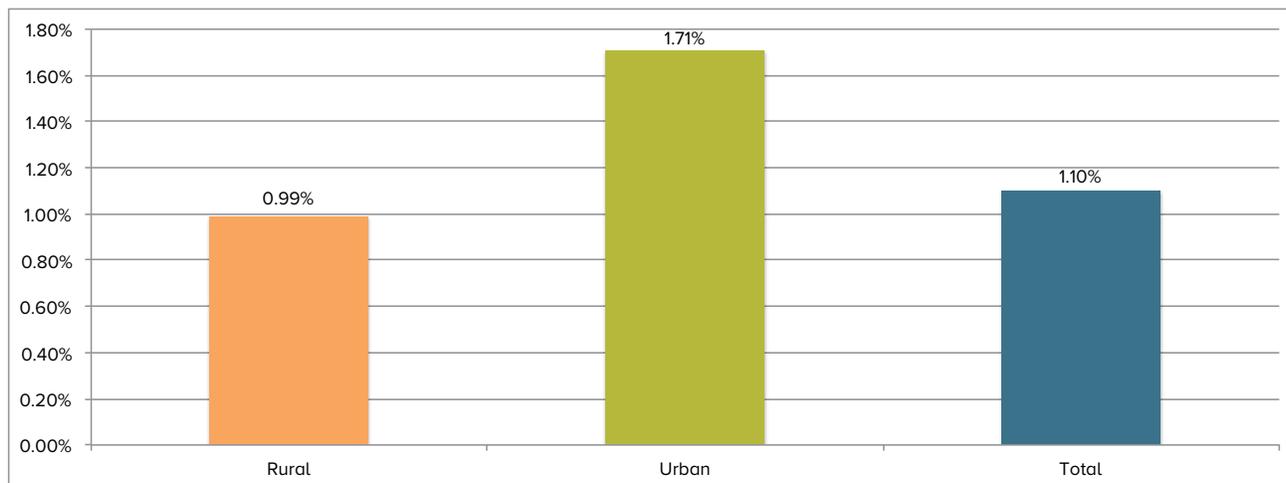


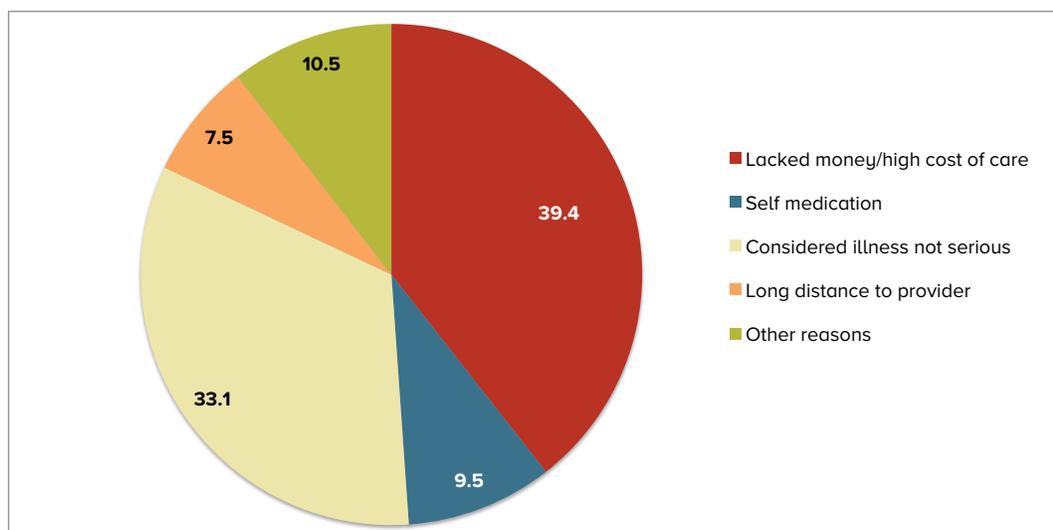
Figure 4.4 Use of Emergency Health Care by Residence



4.1.2 Reasons for Not Seeking Health Care

This report finds that a little over half of the individuals who reported being ill sought healthcare. Furthermore, the above figures indicate that individuals in the age groups that reported a higher rate of illnesses were less likely to seek healthcare in a health facility. In an attempt to understand why people who reported being ill did not often seek care, the survey asked reasons behind not seeking care. This sub-section presents major reasons reported for not seeking care in a health facility. Four main reasons reported for not seeking healthcare include: lack of money, considering illness not serious, self-medication at home, and long distance to facility. Factors often considered important barriers to seeking care such as cultural/religious reasons, poor quality of care, or fear of discovering serious illnesses each contributed 2% or less among reasons reported for not seeking care, and were therefore included all under “other reasons” (see Figure 4.5).

Figure 4.5 Percent of Ill Who Did Not Seek Care by Main Reasons for Not Seeking Health Care



Reasons reported for not seeking healthcare vary significantly by place of residence and economic status, while gender difference in reasons for not seeking care is relatively small. Rural residents were twice as likely to mention lack of money as a reason for not seeking care (38.5%) compared with urban residents (19.0%). Likewise, individuals in the poorest wealth quintile households were four times more likely (43.9%) to mention lack of money as a reason for not seeking care as their counterparts in the richest wealth quintile households (10.6%). Lack of money was the main reason for not seeking care for individuals living in rural areas or in the poorest wealth quintile households, while considering illness 'not serious' was the main reason for not seeking care among individuals in urban areas and those in the wealthiest households (see Table 4.4). Lack of money as a barrier to seeking care has not changed significantly since the previous survey, in which 42.5% cited either shortage of money or high cost of care as the reason, compared to 39.4% in this survey.

The previous survey (FMOH 2014), against expectation, found that individuals from households in the richest wealth quintile were more likely to mention lack of money as a reason for not seeking healthcare. The other findings of the current report are consistent with the result of the previous HA report (FMOH 2014) as well as other earlier findings, such as the ones reported by the FMOH (2010b) and CSA (2012). In all of these studies, lack of money or services being too expensive, perceptions that illnesses were not severe, as well as self-medication were among the three main reasons reported for not seeking care. While further studies are required to explain the above findings, the following factors could be considered as some of the potential explanatory factors. First, urban residents are more likely to have access to information and are more likely to be educated, which potentially enables them to assess the nature of their illness better than rural residents can. Second and more importantly, urban residents have better access to medicines through private pharmacies and other drug vendors that are more abundantly available in urban than in rural areas, which enables self-medication among urban residents. As indicated above, further investigations are needed to empirically test these hypotheses and understand the determinants of self-medication in both rural and urban areas.

There was considerable variation among regions in reported reasons for not seeking care. For example, in the more urbanized regions such as Addis Ababa, Dire Dawa and Harari, lack of money was not reported as a main reason for not seeking care. Rather, the majority of individuals who were reportedly ill in these regions failed to seek healthcare because they did not consider their illnesses to be severe. On the other hand, in the more agrarian regions such as Amhara, Oromia and SNNPR, lack of money was reported to be the main reason people did not seek healthcare (See Table 4.4).

Table 4.4 Main Reasons for Not Seeking Care by Sex, Wealth Status, Residence and Region

| | Lacked money | Self medication | Poor quality of care | High cost of care | Religious/cultural reasons | Fear of discovering serious illness | Considered illness not serious | Long distance to provider | Other | Total |
|-------------------------|--------------|-----------------|----------------------|-------------------|----------------------------|-------------------------------------|--------------------------------|---------------------------|------------|------------|
| Sex | | | | | | | | | | |
| Male | 34.4 | 11.2 | 1.9 | 2.7 | 1.4 | 1.1 | 35 | 6.7 | 5.7 | 100 |
| Female | 38 | 8 | 2 | 3.4 | 1.7 | 1 | 31.5 | 8.2 | 6.3 | 100 |
| Residence | | | | | | | | | | |
| Rural | 38.5 | 9.2 | 1.9 | 3.3 | 1.5 | 1 | 31.5 | 7.8 | 5.4 | 100 |
| Urban | 19 | 11.3 | 2.6 | 1.3 | 2.2 | 1.5 | 45.9 | 4.8 | 11.4 | 100 |
| Regions | | | | | | | | | | |
| Addis Ababa | 7.7 | 4.7 | 2.3 | 0.0 | 2.3 | 2.6 | 61.7 | 0.6 | 18.1 | 100 |
| Afar | 25.3 | 9.2 | 2.4 | 0.0 | 0.0 | 0.0 | 22.1 | 21.9 | 18.3 | 100 |
| Amhara | 36.9 | 6.2 | 2.3 | 3.0 | 1.0 | 1.6 | 36.3 | 7.7 | 5.1 | 100 |
| Benishangul Gumuz | 38.2 | 13.1 | 4.5 | 2.8 | 0.7 | 0.0 | 17.6 | 21.7 | 1.4 | 100 |
| Dire Dawa | 27.7 | 0.0 | 10.8 | 1.6 | 9.2 | 0.8 | 49.1 | 0.8 | 0.0 | 100 |
| Gambella | 36.9 | 17.2 | 1.5 | 0.0 | 0.0 | 0.0 | 32.5 | 6.5 | 5.5 | 100 |
| Harari | 12.5 | 4.3 | 0.0 | 0.0 | 0.0 | 0.0 | 59.0 | 10.0 | 14.3 | 100 |
| Oromia | 42.0 | 13.7 | 1.1 | 3.4 | 0.0 | 0.2 | 28.4 | 7.4 | 3.7 | 100 |
| SNNPR | 39.6 | 11.6 | 0.6 | 1.6 | 1.8 | 0.3 | 30.8 | 3.0 | 10.9 | 100 |
| Somali | 37.6 | 9.5 | 6.4 | 1.4 | 0.2 | 0.3 | 18.0 | 18.4 | 8.3 | 100 |
| Tigray | 23.7 | 7.1 | 2.6 | 6.9 | 8.8 | 2.5 | 34.1 | 9.2 | 5.1 | 100 |
| Wealth quintiles | | | | | | | | | | |
| Poorest | 43.9 | 7.2 | 1.6 | 4.2 | 1.2 | 1 | 28.3 | 8.3 | 4.3 | 100 |
| Q2 | 35.5 | 9.1 | 3.4 | 2.8 | 1.5 | 0.6 | 31.3 | 9.1 | 6.7 | 100 |
| Q3 | 36.8 | 9.8 | 1.8 | 2.8 | 2.2 | 1.3 | 29.7 | 9.4 | 6.4 | 100 |
| Q4 | 35.4 | 11.1 | 0.9 | 2.7 | 0.6 | 0.9 | 39.3 | 4.6 | 4.5 | 100 |
| Richest | 10.6 | 14.9 | 2.1 | 1.2 | 3.1 | 1.8 | 53.2 | 0.7 | 12.6 | 100 |
| Total | 36.3 | 9.5 | 2.0 | 3.1 | 1.5 | 1.0 | 33.1 | 7.5 | 6.0 | 100 |

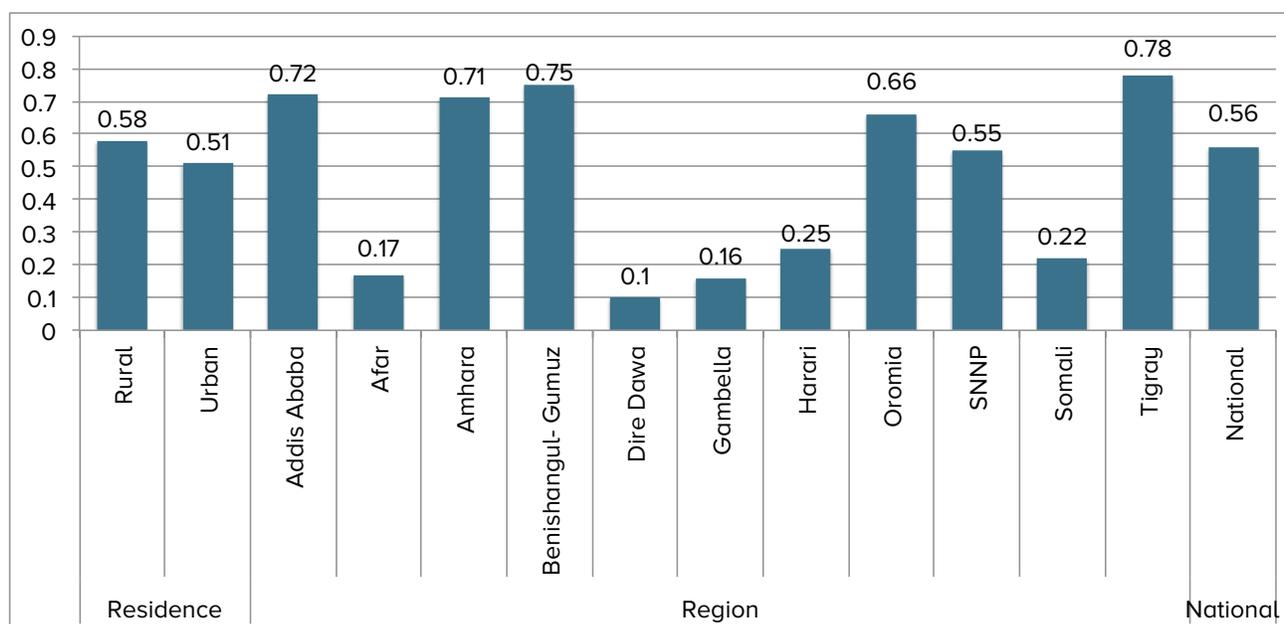
4.2. Use of Outpatient Health Services

The sixth round household survey included a number of questions that sought to understand outpatient healthcare⁹ seeking behavior, such as reasons for seeking healthcare, where care was sought, choice of outpatient service providers, distance travelled to seek care, reasons for using or bypassing the nearest outpatient service provider, and the level of compliance with prescribed care. This section provides analysis of data collected on use of outpatient services in Ethiopia.

4.2.1 Outpatient Health Care Seeking Behavior

As can be seen from fig 4.6 below, there was variation in outpatient service between rural and urban areas as well as among regions. The per capita visit per year was estimated at 0.58 visits in rural areas, 0.51 visits in urban areas, and 0.56 visits nationally. However, outpatient health care utilization rates showed considerable variation when the survey data were disaggregated by region. The per capita per year outpatient health services utilization rate was the highest in Tigray region (0.78 visits) followed by Benishangul Gumuz and Addis Ababa with 0.75 and 0.72 visits respectively. The lowest per capita per year outpatient services utilization rate was reported in Dire Dawa, Gambella, Afar, Harari and Somali regions, which was 0.25 visits and lower.

Figure 4.6 Per Capita Outpatient Visits per Year by Residence and Region



4.2.2 Causes of Outpatient Visits to a Health Facility

Table 4.6 provides self-reported causes of outpatient visits. As stated earlier, about 10% of individuals residing in the sampled households reported being ill in the four weeks preceding the survey. Over half (53%) of those individuals who were ill reported seeking care. Seeking nutritional supplements (such as baby formula) was cited as a major reason for making an outpatient visit, followed by treatment of intestinal worms and malaria (see Table 4.6 for top 5 causes of outpatient visits).

⁹ An **out-patient** is a person who goes to a health care facility for a consultation/treatment, and who leaves the facility within several hours of the start of the consultation without being “admitted” to the facility as a patient.

Table 4.7 shows self-reported causes of outpatient visits by service/disease categories. Over half of those individuals who sought care mentioned an infectious or communicable disease as the reason for seeking care – the three major causes in this category being malaria (11.1%), pneumonia (9.3%) and diarrhea (8.7%). Chronic or non-communicable diseases such as cancer, diabetes, kidney diseases and mental disorder caused 10% of the total outpatient visits. The number of outpatient visits arising from non-communicable diseases has increased significantly since the last survey (FMOH 2014), where non-communicable diseases caused just 4.8% of outpatient visits.

Table 4.6 Causes of Outpatient Visits to a Health Facility Among Those Using a Health Facility

| Top 5 illness and services | % |
|---|-------|
| Nutritional supplements | 21.7% |
| Intestinal worms | 11.8% |
| Malaria | 11.1% |
| Diseases of Respiratory organ including pneumonia | 9.3% |
| Diarrhea | 8.7% |

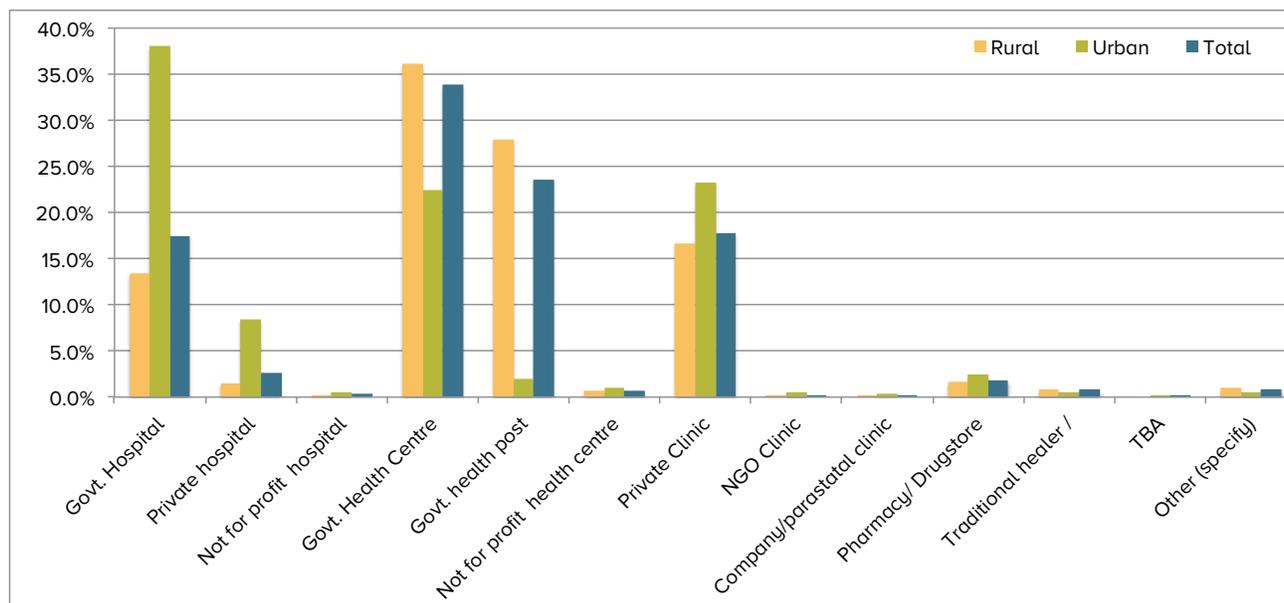
Table 4.7 Causes of Outpatient Visits by Disease/Service Categories from those reported use of health facilities

| Illness and services categories | % |
|--|---------------|
| Communicable diseases (malaria, pneumonia, TV, HIV, diarrhea, intestinal worms) | 54.1% |
| Nutritional supplements (baby formula, micronutrients and minerals) | 25.7% |
| Non-communicable diseases (cancers, diabetics, chronic kidney diseases, mental disorder) | 10.1% |
| Family planning and reproductive health (including delivery care) | 6.6% |
| Physical check-up and immunizations (prevention) | 4.8% |
| Injuries | 2.1% |
| Other Services | 3.3% |
| Total | 100.0% |

4.2.3 Choice of Outpatient Service Providers

Figure 4.7 shows types of service providers used by outpatient visitors among rural and urban residents. Overall, government healthcare providers were responsible for the majority of outpatient services provided (77% in rural and 63% in urban areas) in the country. The types of health facilities chosen by outpatients were affected by place of residence of service users. For instance, rural residents were more likely to use lower-level government facilities (i.e. health centers and health posts), while urban residents were more likely to use higher-level government facilities (government hospitals) and private facilities. More specifically, urban residents who sought outpatient health care were about three times more likely to use government hospitals, and more than five times more likely to use private hospitals than rural residents.

Figure 4.7 Choice of Providers by Residence



Government health facilities were used by a larger proportion of individuals living in the poorest households (80%) than individuals living in the richest households (62%). Conversely, private health facilities were more likely to be used by individuals living in the richest households (See Figure 4.8). Individuals living in the richest households were at least two times more likely to use outpatient care provided by private health facilities (34%) than individuals living in the poorest households (16%).

Figure 4.8 Health Care Providers Used for Outpatient Services by Wealth Status

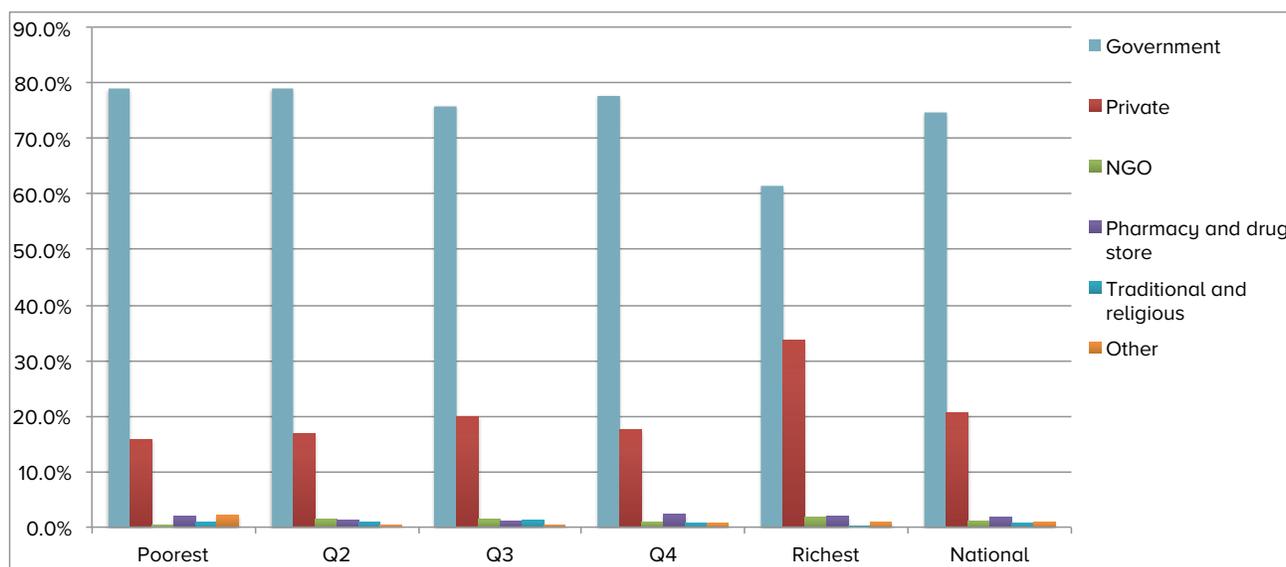


Table 4.8 shows that proximity of health facility to home is the main reason people chose the outpatient healthcare provider they visited. About half of the outpatient healthcare seekers indicated that proximity of the provider to their homes influenced their choice of outpatient facility. Other main factors that were reported to influence patients' choice of outpatient health service providers include availability of medicines (8.5%), good counseling by staff (7.3%), waiting time (5.5%), qualification of staff (5.3%), and whether the facility accepts patients of the fee waiver system (5.4%).

Proximity of facility to home and availability of medicines were more important to rural residents in choosing a facility than to urban residents. Interestingly, cost of services was more important to urban residents while acceptance of users of waiver system was more important to rural residents.

Table 4.8 Reasons for Choice of Outpatient Health Service Providers

| Reasons | Rural | Urban | Total |
|--|---------------|---------------|---------------|
| Close to home | 51.3% | 43.3% | 49.9% |
| Medicine available | 9.1% | 5.8% | 8.5% |
| Staff give good advice | 7.0% | 9.0% | 7.3% |
| Less waiting time | 5.4% | 6.0% | 5.5% |
| Accept users of waiver system | 5.8% | 3.3% | 5.4% |
| Staff are qualified | 4.5% | 9.2% | 5.3% |
| Knew someone in the facility | 4.0% | 2.8% | 3.8% |
| Good staff attitude | 3.1% | 4.7% | 3.4% |
| Less costly | 2.1% | 3.6% | 2.3% |
| Accept insurance (CBHI) | 1.5% | 3.7% | 1.9% |
| Provide exempted services | 1.9% | 1.7% | 1.8% |
| Other (specify) | 1.1% | 2.7% | 1.4% |
| Was referred | 0.9% | 2.1% | 1.1% |
| Felt not seriously ill (minor ailment) | 0.9% | 0.6% | 0.9% |
| Cleaner facility | 0.5% | 0.6% | 0.5% |
| More privacy | 0.3% | 0.4% | 0.3% |
| Don't know | 0.7% | 0.6% | 0.7% |
| Total | 100.0% | 100.0% | 100.0% |

4.2.4 Bypassing the Nearest Outpatient Health Service Providers

As indicated above, distance was a key determinant of the healthcare provider that patients chose. However, distance was not the only variable that influenced patients' choice of facility. Respondents were asked whether the outpatient health facility they chose was the closest to their home, and reasons for choosing the provider they visited. Table 4.9 provides survey data on the percentage of patients visiting or bypassing the nearest health facility, disaggregated by sex, place of residence and region. The majority of outpatient visits (73.4%) were made to the nearest (public or private) facility, an increase from what was reported in the previous survey (FMOH 2014) where 66% of outpatient visits were made to the nearest health facility. This implies that only 26.6% of outpatient visitors in the current survey bypassed the nearest health facility, which was slightly lower among women (26.1%) than men (27.0%). Outpatient visitors living in urban areas were more likely to bypass the nearest facility (31.7%) compared with outpatient service users living in rural areas (25.5%).

Significant regional variation was observed on the level of using or bypassing the nearest outpatient care facility. Most outpatient visitors in Gambella (57.9%) reported bypassing the nearest facility, more than patients in any other region, while outpatients in Tigray were least likely to bypass the nearest facility (12.4%). Similarly, outpatients in Amhara (18.4%) and Dire Dawa (22.1%) were also less likely to bypass the nearest outpatient health facility. Outpatients in these regions were more likely to use the nearest facility (Table 4.9).

Table 4.9 Outpatient Health Service Users Who Bypassed the Nearest Health Facility, by Sex, Residence and Region

| | Used nearest health facility (%) | | | Bypassed nearest health facility (%) | | |
|----------------------|----------------------------------|--------------|--------------|--------------------------------------|--------------|--------------|
| | Male | Female | Total | Male | Female | Total |
| Residence | | | | | | |
| Rural | 67.1% | 69.2% | 68.3% | 32.9% | 30.8% | 31.7% |
| Urban | 74.1% | 74.9% | 74.5% | 25.9% | 25.1% | 25.5% |
| Regions | | | | | | |
| Addis Ababa | 72.0% | 77.1% | 74.8% | 28.0% | 22.9% | 25.2% |
| Afar | 66.8% | 73.7% | 70.0% | 33.3% | 26.3% | 30.0% |
| Amhara | 82.9% | 80.2% | 81.6% | 17.1% | 19.8% | 18.4% |
| Benishangul Gumuz | 56.5% | 58.6% | 57.6% | 43.5% | 41.4% | 42.5% |
| Dire Dawa | 70.3% | 75.6% | 77.9% | 29.7% | 24.4% | 22.1% |
| Gambella | 42.4% | 41.8% | 42.1% | 57.7% | 58.2% | 57.9% |
| Harari | 69.5% | 61.2% | 65.3% | 30.5% | 38.8% | 34.7% |
| Oromia | 65.0% | 66.5% | 65.7% | 35.1% | 33.5% | 34.3% |
| SNNPR | 73.1% | 74.9% | 74.0% | 26.9% | 25.1% | 26.0% |
| Somali | 62.3% | 61.9% | 62.1% | 37.7% | 38.1% | 37.9% |
| Tigray | 86.8% | 88.3% | 87.6% | 13.2% | 11.7% | 12.4% |
| Total | 73.0% | 73.9% | 73.4% | 27.0% | 26.1% | 26.6% |

4.2.5 Reasons for Bypassing the Nearest Outpatient Health Service Providers

Table 4.10 shows reasons provided by individuals who bypassed the nearest health facility to seek outpatient health services at another facility. The main reason for bypassing the nearest facility was a perception that the quality of care at the nearest health facilities is too low. In particular, about 50% of individuals who bypassed the nearest facility cited either lack of drugs or qualified staff as reasons for doing so (30.0% of those who bypassed nearest facility mentioned “unavailability of medicines” and 17.1% stated “unqualified” health staff in the nearest facility). This shows a significant decrease in percentage of individuals who cited unavailability of medicines and unqualified staff as reasons for bypassing the nearest facility, which were 55.6% and 23% respectively in the previous survey (FMOH 2014).

Another 19% of patients who bypassed the nearest outpatient facility stated reasons that could be attributed to poor facility management - 10.4% for “long waiting time” and 8.6% for “unfriendly staff”. Facility closure at the time of visit (13.6%) and failure to provide exempted services or accept patients who use the fee waiver system (7.0%) were also cited as reasons for bypassing the nearest facility. Overall, while there appears to be a significant improvement compared with what was reported in the previous survey, (perception on) unavailability of drugs, and unqualified, uncooperative or unfriendly staff members are still some of the major problems perceived by patients who bypassed the nearest facility.

Table 4.10 Reasons Reported by Outpatient Health Service Users for Bypassing the Nearest Health Facility

| | Percent (of weighted population) |
|--|----------------------------------|
| Individuals who received outpatient care at nearest health facility | 73.4% |
| Individuals who bypassed nearest the health facility | 26.6% |
| Reasons for bypassing | |
| Medicine unavailable | 33.0% |
| Staff are unqualified | 17.1% |
| Facility closed (at the time) | 13.6% |
| Long waiting time | 10.4% |
| Unfriendly staff | 8.6% |
| Would have paid (facility doesn't provide exempted service) | 5.3% |
| More expensive services | 3.5% |
| No privacy | 3.4% |
| Facility not in operation | 1.8% |
| Would have paid (facility doesn't accept waiver system users) | 1.7% |
| Would have paid (facility didn't sign agreement with insurance scheme) | 1.1% |
| Dirty facility | 0.6% |
| Total | 100.0% |

4.2.6 Distance Traveled to Obtain Outpatient Health Services

Patients who sought outpatient care reported traveling an average distance of about 27.9 kilometers to reach a health facility and return back home (Table 4.11), representing an increase from 17 kilometers in the previous survey (FMOH 2014). Part of this increase could be because the reported distance by kilometers were mainly estimated, rather than measured, which could lead to under/over estimation. About 70% of the outpatient health service seekers reported obtaining the health services they needed by traveling less than 15 kilometers. As expected, distance traveled by outpatient health service seekers differs between people living in urban and rural areas. A larger proportion of rural patients (32.6%) traveled a long distance (greater than 15 km round-trip) to seek outpatient services than patients from urban settings (13.0%). The proportion of patients who reported traveling 15 km or more round-trip to seek outpatient services seems to have increased since the previous survey in both rural (21.6%) and urban (5.6%) areas, which appears implausible given the continuous expansion of facilities. However, it is important to note that expressing distance in kilometers is often challenging for respondents, particularly in rural areas.

The majority of outpatient service users (67.1%) traveled on foot to reach the health facility. In rural areas, over 70% of outpatient service users walked to the facility they visited while less than 30% of them used public or other means of transportation to reach the facility of their choice. In urban areas, about half of the outpatient service users reported walking to health facility while the remaining half reported using either public transport, taxi or private means of transportation (Table 4.11).

Table 4.11 Distance Traveled and Type of Transportation Used by Outpatient visitors

| | Rural | Urban | Total |
|---|---------------|---------------|---------------|
| Distance Traveled to Facility (roundtrip) | | | |
| 0 – 1 KM | 19.6% | 35.0% | 22.2% |
| 1.001 – 5 KM | 21.2% | 39.0% | 24.3% |
| 5.001 – 10 KM | 19.4% | 10.3% | 17.8% |
| 10.001 – 15 KM | 7.2% | 2.8% | 6.4% |
| Greater than 15 KM | 32.6% | 13.0% | 29.2% |
| Average KM travelled | 30.3 | 16.3 | 27.9 |
| Means of transport | | | |
| Woreda/HC/Hospital Ambulance | 0.5% | 0.4% | 0.5% |
| Public transport (e.g. Bus, minibus, taxi, truck) | 11.9% | 5.1% | 10.7% |
| Private (own means) | 0.8% | 2.6% | 1.1% |
| Taxi (private)/Bajaj/Gari | 6.8% | 40.4% | 12.4% |
| Boat | 0.0% | 0.1% | 0.0% |
| Walked | 70.7% | 49.2% | 67.1% |
| Bicycle/motor cycle | 2.7% | 0.7% | 2.4% |
| Animal (e.g. horse, mule, camel) | 3.2% | 0.1% | 2.7% |
| Air | 0.1% | 0.0% | 0.1% |
| Traditional ambulance | 1.1% | 0.0% | 0.9% |
| Other (specify) | 2.4% | 1.4% | 2.2% |
| Total | 100.0% | 100.0% | 100.0% |

4.2.7 Patient Satisfaction with Outpatient Services

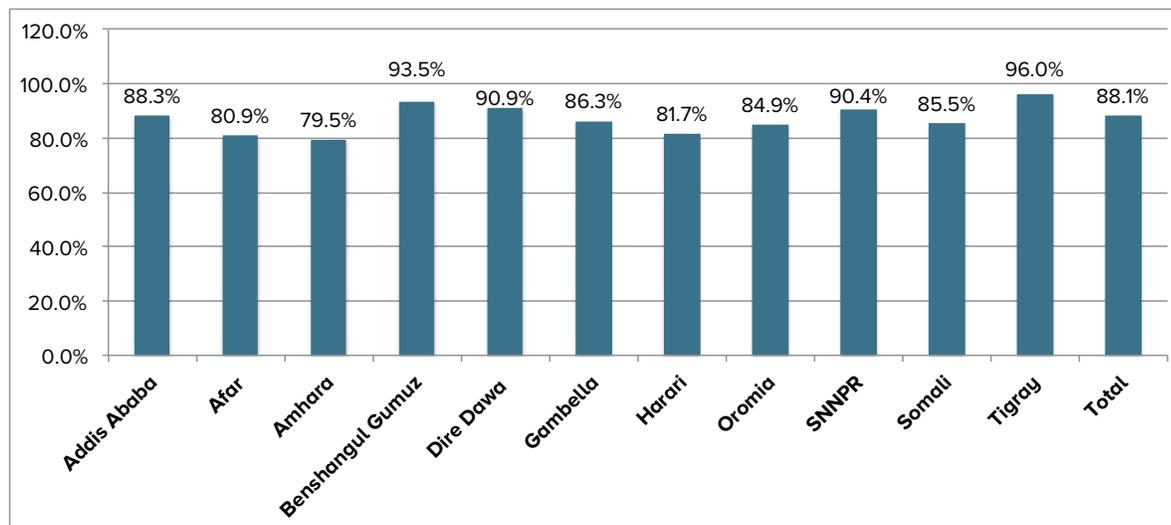
Self-reported patient satisfaction was used as a proxy to assess health care quality. Table 4.12 shows self-reported satisfaction ratings of individuals who made outpatient visits by wealth status. Overall, about 88% of the outpatient visitors reported that they were satisfied with the health services they received from the health facilities they visited, a slight increase from the previous survey where 86.8% reported they were satisfied. However, there appears to be some variation in the rating of patient satisfaction depending on economic status. Patients in the poorest households reported a higher rate of satisfaction with the outpatient services they received compared with patients with better economic status. This result is consistent with the finding of the previous survey (FMOH 2014).

Table 4.12 Patient Satisfaction with Outpatient Health Services

| Wealth Quintiles | Is patient satisfied with the outpatient services he/she received? | | | |
|------------------|--|--------------|-------------|---------------|
| | Yes | No | Don't know | Total |
| Poorest | 90.7% | 8.6% | 0.7% | 100.0% |
| Q2 | 85.7% | 12.7% | 1.5% | 100.0% |
| Q3 | 87.4% | 11.3% | 1.3% | 100.0% |
| Q4 | 88.1% | 11.6% | 0.4% | 100.0% |
| Richest | 88.3% | 11.2% | 0.5% | 100.0% |
| Total | 88.1% | 11.0% | 0.9% | 100.0% |

In terms of regional distribution, the highest proportion of satisfied or very satisfied outpatient visitors was found in Tigray (96%) followed by Benishangul Gumuz (93.5%) regions. Amhara (79.5%) and Afar (80.9%) regions were among the regions with the lowest rate of satisfaction with the outpatient services they received. (Figure 4.9)

Figure 4.9 Percent of Outpatient Visitors who Reported Being ‘Satisfied’ or ‘Very Satisfied’ with Outpatient Health Services Received by Region



Patient satisfaction rates were collected for different aspects of outpatient services. Patients’ satisfaction differed among the different dimensions of outpatient health care quality. Overall, the majority of outpatient visitors were satisfied or very satisfied with the various aspects of service they received; however, the highest rate of satisfaction (92%) was reported for “time spent with the clinician” while the lowest rate of satisfaction (78%) was reported for “availability of diagnostic facility”. This is also consistent with the finding of the previous report, where higher rate of satisfaction was reported for ‘time spent with clinician’ and a lower rate of satisfaction was documented with regards to availability of pharmaceuticals and waiting time (see Table 4.13).

Table 4.13 Patient’s Satisfaction with Respect to Different Aspects of Outpatient Health Services Level of patient’s satisfaction (%)

| | Level of patient’s satisfaction (%) | | | | | |
|-------------------------------------|-------------------------------------|-----------|---------------|----------------------|-------------|-------|
| | Very satisfied | Satisfied | Not satisfied | Not at all satisfied | Do not know | Total |
| Time spent with the clinician | 33% | 59% | 7% | 0% | 1% | 100% |
| Waiting time | 26% | 59% | 13% | 1% | 1% | 100% |
| Courtesy of staff | 28% | 63% | 7% | 1% | 1% | 100% |
| Availability of drugs | 29% | 58% | 11% | 1% | 1% | 100% |
| Cleanness of facility | 26% | 65% | 7% | 0% | 2% | 100% |
| Privacy during consultation | 26% | 60% | 8% | 0% | 5% | 100% |
| Motivation of staff | 25% | 64% | 8% | 1% | 2% | 100% |
| Skill of provider | 27% | 61% | 8% | 0% | 4% | 100% |
| Availability of diagnostic facility | 20% | 58% | 12% | 1% | 9% | 100% |

Individuals who visited a health facility in the event of illness were asked to report whether they have taken all the prescribed treatments (Table 4.14). About 93% of outpatient visitors reported that they completed their prescribed treatments (an increase from 90.5% reported in the previous survey).

As expected, patients' compliance rate was higher for urban than rural areas, and for the richest than the poorest individuals (both inconsistent with the finding of last survey). The most significant reasons cited among those who reported not taking the complete outpatient treatment as prescribed by health professional were lack of money (53.5%), not considering illness as serious (23.3%), long distance to provider (7.5%) and self-medication (5.5%).

The importance of these inhibiting factors varies by place of residence and economic status of households. For instance, 55.4% of rural residents who did not complete treatment cited lack of money as a reason for not taking all of the prescribed outpatient treatments, while only 33.8% of patients in urban area reported this as a reason. Likewise, only 4.2% of rural residents mentioned self-medication, while 20.2% of urban residents stated it as a reason for not completing the prescribed treatment.

Patients in the poorest households were more likely to indicate lack of money (55.2%) compared with those in the richest households (25.4%) as a reason for not completing outpatient treatment. The previous survey (FMOH 2014) reported that, "surprisingly, shortage of money was a more constraining factor for individuals in urban than rural areas, and for individuals in the richest households than in the poorest households." Interestingly, in the current survey, 'poor quality of service' was six times more likely to be cited by patients in the richest households (13.1%) as a reason for not completing outpatient care compared with those in the poorest households (1.9%).

Table 4.14: Compliance with Prescription for Outpatient Services

| | | Residence | | Wealth Quintile | | | | | Total |
|---|--|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|
| | | Rural | Urban | Poorest | Q2 | Q3 | Q4 | Richest | |
| Completed all prescribed outpatient treatments at the visited health facility | | 92.20% | 97.20% | 91.90% | 92.80% | 91.00% | 92.60% | 97.20% | 93.30% |
| Reasons for not taking complete outpatient treatment as prescribed by health professional among those who reported not completing treatment | Lacked Money | 55.40% | 33.80% | 55.20% | 57.60% | 62.50% | 49.10% | 25.40% | 53.60% |
| | Self medication | 4.20% | 20.20% | 5.60% | 5.70% | 4.10% | 0.40% | 20.50% | 5.50% |
| | Poor quality service | 3.20% | 9.50% | 1.90% | 7.80% | 1.30% | 0.90% | 13.10% | 3.80% |
| | High Cost of Care | 3.20% | 12.30% | 7.30% | 2.50% | 3.40% | 0.00% | 9.00% | 3.90% |
| | Religious /cultural reasons | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Fear of discovering serious illness | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Considered illness not serious | 24.00% | 16.40% | 17.70% | 23.80% | 23.10% | 28.20% | 26.10% | 23.30% |
| | Long distance to provider | 7.60% | 6.20% | 8.40% | 2.60% | 5.60% | 14.70% | 4.50% | 7.50% |
| | Others | 2.50% | 1.60% | 3.90% | 0.00% | 0.00% | 6.60% | 1.40% | 2.40% |
| | Total | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |

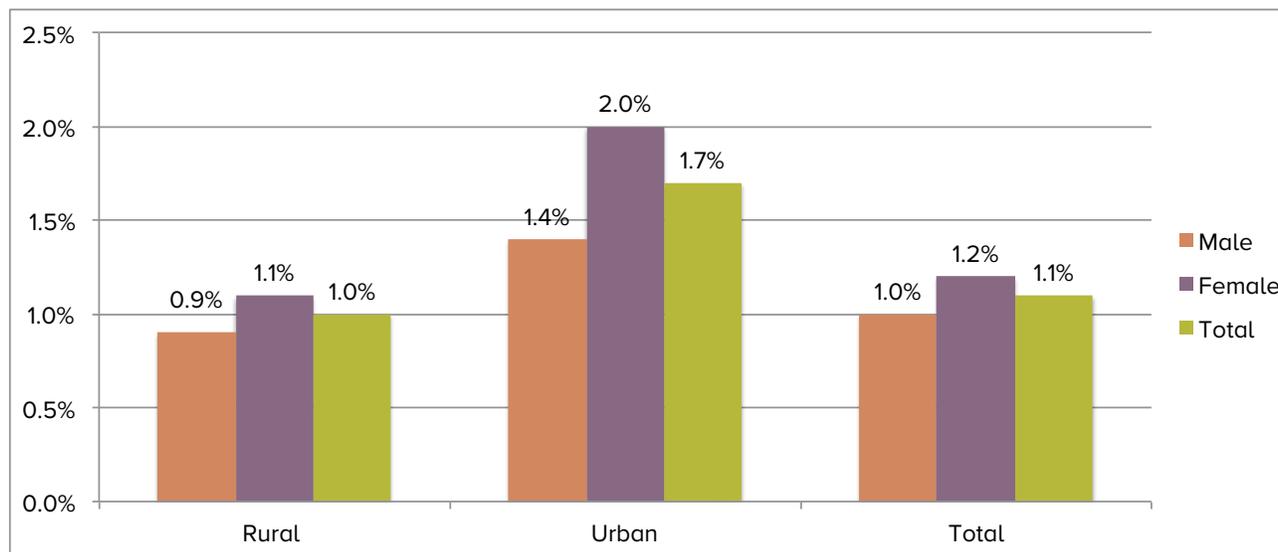
4.3. Use of Inpatient Health Services

This household survey included a number of questions that sought to understand inpatient¹⁰ healthcare seeking behavior such as reasons for inpatient admission, type of facility where care was sought, choice of inpatient service providers, distance travelled to seek inpatient care, reasons for using or bypassing the nearest inpatient service provider, and compliance with prescribed care. Inpatient healthcare in this document refers to services provided to patients admitted for care in a facility with doctor’s decision. This section presents an analysis of data collected from households on use of inpatient services in Ethiopia.

4.3.1 Inpatient Health Service Utilization

The inpatient admission rate was reported to be 1.1% of the total population, an increase from 0.9% reported in the previous survey (FMOH 2014). Use of inpatient health services was reported to be higher among females (1.2%) than males (1.0%) and for individuals living in urban (1.7%) than rural (1.0%) areas (see Figure 4.10). One reason for a higher use of inpatient services by females than males could be because of health care utilization associated with delivery (such as C-section). A significant difference was observed across regions in inpatient care utilization (see Table 4.15). The highest inpatient admission rate was observed in Benishangul Gumuz (2.4%), followed by Tigray (2.2%). The lowest inpatient admission rate was reported in Afar and Gambella (0.5%), followed by Amhara (0.7%). As indicated above, females are more likely to use inpatient services compared with males, except in Afar, Dire Dawa and Gambella where inpatient care utilizations were reported to be higher among males (see Table 4.15).

Figure 4.10 Inpatient Admission by Sex and Residence



¹⁰ An **in-patient** is a patient who is formally admitted (or “hospitalized”) to an institution for treatment and/or care and stays for a minimum of one night in the hospital or other institution providing in-patient care.

Table 4.15 Inpatient Admission by Region

| Region | Male | Female | Total |
|-------------------|-------------|-------------|-------------|
| Addis Ababa | 1.4% | 1.8% | 1.6% |
| Afar | 1.0% | 0.2% | 0.5% |
| Amhara | 0.6% | 0.8% | 0.7% |
| Benishangul Gumuz | 1.8% | 3.0% | 2.4% |
| Dire Dawa | 1.7% | 1.1% | 1.4% |
| Gambella | 0.8% | 0.3% | 0.5% |
| Harari | 1.1% | 2.6% | 1.7% |
| Oromia | 1.0% | 1.1% | 1.0% |
| SNNPR | 0.9% | 1.1% | 1.0% |
| Somali | 1.6% | 2.2% | 1.9% |
| Tigray | 1.6% | 2.7% | 2.2% |
| Total | 1.0% | 1.2% | 1.1% |

Individuals who were admitted for inpatient care to a health facility in the 12 months preceding the survey were asked to report the main causes for their inpatient admission. Table 4.16 shows that diseases of respiratory infections, including pneumonia, have overtaken malaria (which was the main cause of admission in the previous survey) as the main reason for inpatient admission. Malaria was reported as a second reason for admission (6.1%) followed by intestinal worms (5.7%) and diarrhea (5.5%).

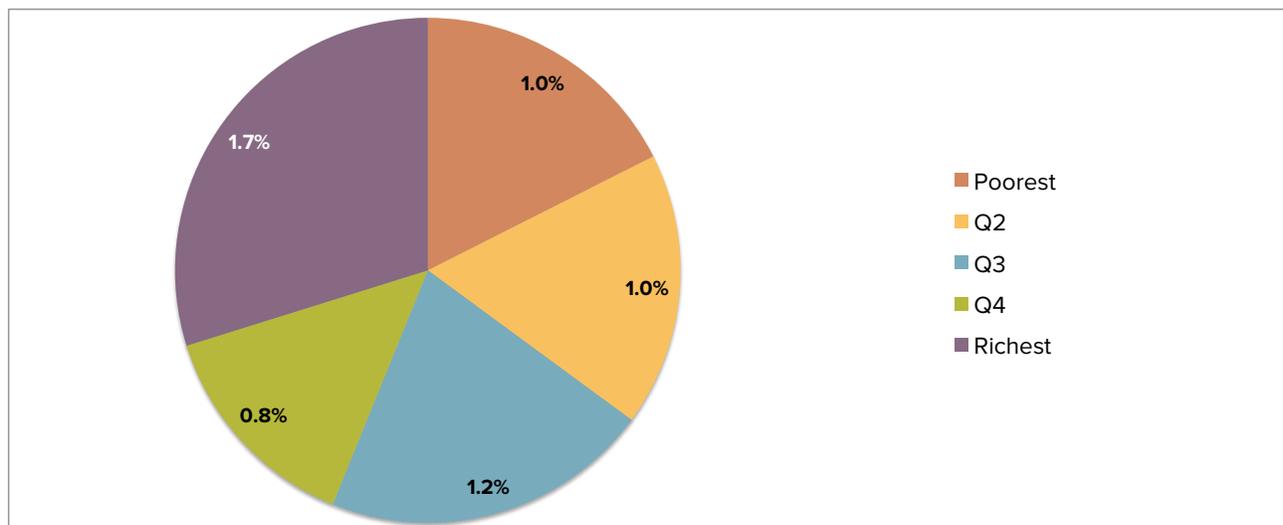
Non-communicable diseases accounted for 13.9% of total causes of inpatient admissions in the 12 months prior to the survey. In the previous survey, non-communicable diseases were reported to account for just 7.44% of all inpatient admissions in the 12 months preceding the survey.

Table 4.16 Top 5 Reasons for Inpatient Admissions

| Reasons | Percent |
|---|-------------|
| Diarrhea and intestinal worms | 11.2 |
| Diseases of Respiratory including pneumonia | 8.7% |
| Malaria | 6.1% |
| Diabetics | 5.5% |
| Delivery | 4.3% |

Inpatient health seeking behavior appears to be closely associated with households' wealth status (see Figure 4.11). Inpatient health services utilization was reported to be higher among individuals living in the richest households (1.7%) than those living in the poorest households (1.0%). A similar association was reported by the previous household survey, where these figures were reported to be 1.3% and 0.8% for individuals living in the richest and poorest households, respectively.

Figure 4.11 Inpatient Admission Rate by Wealth Status



4.3.2 Choice of Inpatient Health Service Providers

Table 4.17 shows a breakdown of inpatient health services provided by types of inpatient service provider. As expected, government health facilities (hospitals and health centers) were the providers of the majority of inpatient services. The share of government healthcare facilities (government hospitals and health centers) in inpatient care increased from 60.8% in the previous survey (FMOH 2014) to 78% in this survey (See Table 4.17). Private health facilities provided 18% of inpatient services (a slight decline from 20.8% reported in the last survey), while NGO health facilities were responsible for the remaining 2% of inpatient care provided in the country.

Choice of inpatient service provider appears to vary based on economic status of households. Individuals living in the poorest households were more likely to use government health centers or NGO hospitals than patients from the richest households. Inversely, individuals living in the richest household were about four times more likely to use private hospitals and five times less likely to use government health centers or NGO hospitals compared with their counterparts living in the poorest households. Inpatient services provided by government hospitals appear to be used more equitably by individuals from all economic statuses compared to government health centers and private facilities, although those from the richest households appear marginally more likely to use government hospitals than patients living in the poorest households (see Table 4.17). This could be because poorer household are more likely to use inpatient services in government health centers.

Table 4.17 Type of Chosen Inpatient Health Service Providers by Wealth Status

| Facility Type | Poorest | Q2 | Q3 | Q4 | Richest | Total |
|------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Govt. Hospitals | 62.8% | 68.8% | 59.2% | 69.4% | 65.3% | 64.8% |
| Private hospitals | 4.6% | 6.9% | 2.4% | 11.0% | 17.4% | 9.6% |
| Not for profit hospital | 2.6% | 1.0% | 5.0% | 0.0% | 0.5% | 1.8% |
| Govt. health center | 26.5% | 11.9% | 12.5% | 18.4% | 5.7% | 13.2% |
| Private clinic | 3.3% | 11.4% | 20.9% | 0.4% | 10.8% | 10.5% |
| Not for profit health center | 0.0% | 0.0% | 0.0% | 0.8% | 0.3% | 0.2% |
| Abroad (care sought abroad) | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Traditional healer | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Other | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

More than 60% of individuals living in both rural and urban areas received inpatient care from government hospitals. Among individuals living in rural areas, the inpatient service provider most used was a government hospital, followed by government health center and private clinics (See Figure 4.12). For patients living in urban areas, however, the second most commonly used inpatient facilities were private hospitals and private clinics.

Figure 4.12 Type of Inpatient Health Service Providers Visited, by Residence

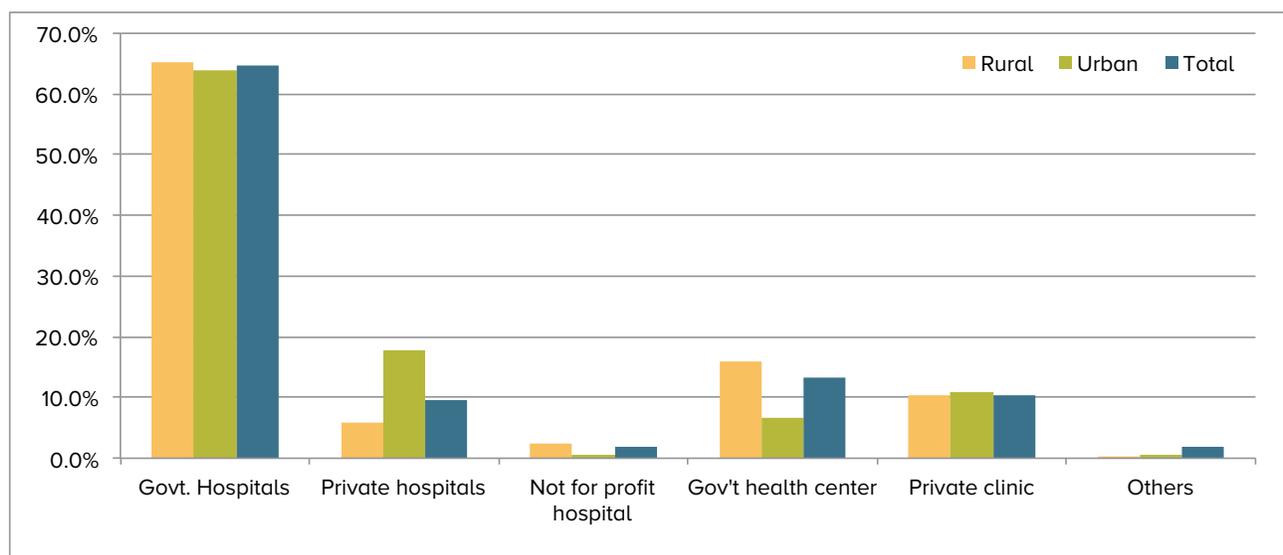


Table 4.18 provides the main reasons inpatient service users reported for choosing the inpatient health service providers they used. Proximity of the facility to one's home (25.7%) and availability of medicines (15.3%) were the dominant reasons for choosing the facility they visited. The provision of exempted service (11.1%), presence of qualified staff (9.8%), less waiting time (9.1%), and having known someone working at the facility (8.6%) were some of the other key reasons reported for choosing inpatient facilities. While most of the findings of this report are consistent with that of the previous report (FMOH 2014), being referred to a facility, which was reported as a significant determinant of where patients received care in the previous survey, was not reported as a major factor for choosing an inpatient provider in this study. On the other hand, waiting time was not as an important determinant of facility choice in the previous survey as it is reported in the current study, which may imply an improvement in quality of care.

Table 4.18 Reasons for Choosing the Preferred Inpatient Health Service Providers (%)

| Reason | Rural | Urban | National |
|--|--------------|--------------|--------------|
| Close to home | 25.8 | 25.3 | 25.7 |
| Staff give good advice | 6.7 | 8.2 | 7.1 |
| Good staff attitude | 4.5 | 4.9 | 4.6 |
| Knew someone in the facility | 8.3 | 9.3 | 8.6 |
| Less waiting time | 9.2 | 8.8 | 9.1 |
| Medicine available | 17.0 | 9.9 | 15.3 |
| Staff are qualified | 9.9 | 9.5 | 9.8 |
| Less costly | 0.6 | 8.5 | 2.5 |
| Would have paid (facility didn't sign agreement with insurance scheme) | 1.7 | 2.0 | 1.8 |
| Would have paid (facility doesn't accept waiver system users) | 1.4 | 0.9 | 1.3 |
| Would have paid (facility doesn't provide exempted service) | 12.0 | 8.2 | 11.1 |
| Cleaner facility | 1.2 | 1.7 | 1.3 |
| More privacy | 1.6 | 2.8 | 1.9 |
| Total | 100.0 | 100.0 | 100.0 |

4.3.3 Bypassing the Nearest¹¹ Inpatient Health Service Providers

Individuals who sought inpatient care were asked whether the inpatient health facility they used was the nearest one to their home or not. Table 4.19 shows that 46.3% of the inpatient health service users bypassed the nearest health facility to seek health care at another health facility. Bypassing the nearest inpatient facility increased significantly since the previous survey, where about 32% of inpatient health service users reported bypassing the nearest facility. The level of bypassing the closest inpatient facility varies by sex and place of residence. The likelihood of bypassing the nearest inpatient facility was lower for females (42.9%) than for males (49.5%), which is consistent with the rate of bypassing the nearest facility in outpatient care but inconsistent with what was reported by the previous survey (where 36.5% of inpatient females and 27.1% of males bypassed the nearest inpatient care provider). Hypothetically, the decrease in the rate of bypassing the nearest facility among women could be due to expansion of health facilities or services. Males were more likely to bypass the nearest inpatient facility in both urban and rural areas (Table 4.19).

Table 4.19 Inpatient Health Service Users Who Bypassed the Nearest Health Facility, by Sex and Residence

| Residence | % Used nearest health facility | | | % Bypassed nearest health facility | | |
|--------------|--------------------------------|--------------|--------------|------------------------------------|--------------|--------------|
| | Male | Female | Total | Male | Female | Total |
| Rural | 51.17 | 56.13 | 53.48 | 48.83 | 43.87 | 46.52 |
| Urban | 49.93 | 58.09 | 53.98 | 50.07 | 41.91 | 46.02 |
| Total | 50.55 | 57.11 | 53.73 | 49.45 | 42.89 | 46.27 |

¹¹ The nearest facility was defined as the closest health facility that provides the kind of care sought. Patients or respondents determine which facility is closest to their home among the facilities, if more than one, providing such care.

A significant variation among regions was observed in bypassing the nearest facility (see Table 4.20). Only 8% of inpatient care-seekers in Afar and 8.4% of those in Gambella bypassed the nearest inpatient facility, by far the lowest rate of bypassing compared with other regions. On the other hand, the highest rate of bypassing the nearest in-patient facility was observed in Addis Ababa (63.0%), followed by Dire Dawa (61.7%). These rates likely reflect the greater options of facilities to chose from in urban areas.

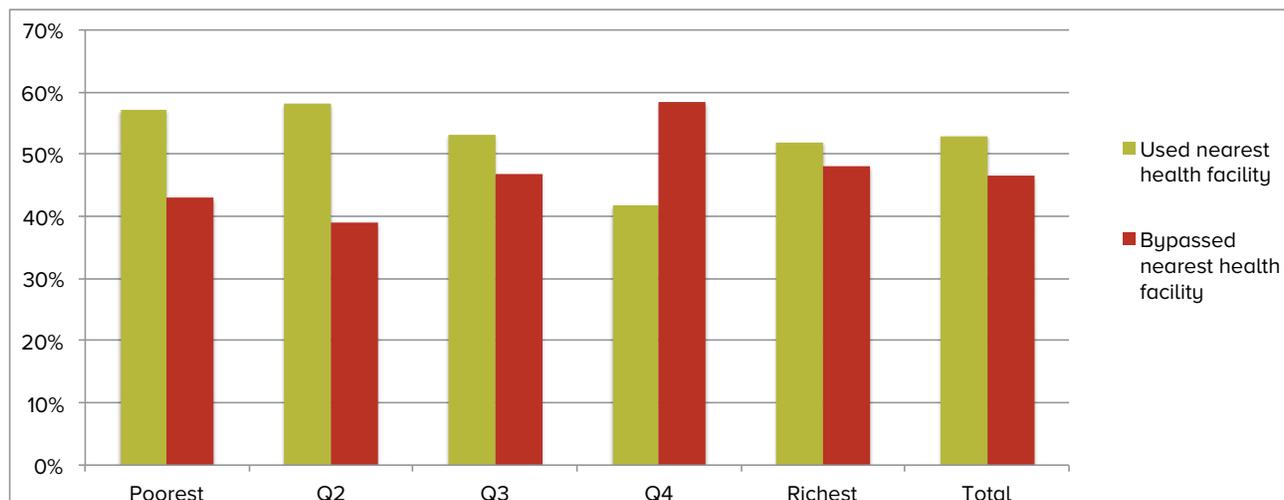
Table 4.20 Inpatient Health Service Users Who Bypassed the Nearest Health Facility, by Sex and Region

| Residence | % Used nearest health facility | | | % Bypassed nearest health facility | | |
|-------------------|--------------------------------|--------------|--------------|------------------------------------|--------------|--------------|
| | Male | Female | Total | Male | Female | Total |
| Addis Ababa | 31.5% | 47.8% | 40.1% | 68.5% | 52.2% | 59.9% |
| Afar | 93.6% | 91.3% | 92.6% | 6.4% | 8.7% | 7.4% |
| Amhara | 57.0% | 57.0% | 57.5% | 38.2% | 39.5% | 38.9% |
| Benishangul Gumuz | 61.9% | 63.3% | 62.6% | 39.8% | 38.4% | 39.1% |
| Dire Dawa | 30.9% | 48.1% | 38.3% | 69.2% | 51.9% | 61.7% |
| Gambella | 100.0% | 83.4% | 91.6% | 0.0% | 16.6% | 8.4% |
| Harari | 71.7% | 63.4% | 68.1% | 28.3% | 36.6% | 31.9% |
| Oromia | 44.9% | 54.8% | 49.3% | 55.1% | 45.2% | 50.7% |
| SNNPR | 58.4% | 62.8% | 60.4% | 42.1% | 39.5% | 40.9% |
| Somali | 48.7% | 46.5% | 47.7% | 51.3% | 53.5% | 52.3% |
| Tigray | 54.2% | 55.4% | 54.8% | 48.5% | 47.4% | 48.0% |
| Total | 50.9% | 56.6% | 53.6% | 49.4% | 44.3% | 47.0% |

Note: Don't know' is excluded from the table; hence, summation of 'bypassed' and 'used' nearest facility may not come to 100%

The prevalence of bypassing the nearest health facilities for inpatient health care appears to increase with wealth – prevalence of 'bypassing' the nearest facility was lower for individuals residing in the poorest (43%) than the richest (46%) households (see Figure 4.13). The probable reasons for this might be that the wealthy are capable of paying the cost of transportation and potentially other costs to obtain what they perceive to be a better quality services at a facility that is located farther away from home, something poorer households may not be able to do.

Figure 4.13 Proportion of Inpatients Who Bypassed the Nearest Health Facility, by Wealth Quintile



Individuals who bypassed the nearest inpatient facility to their home were asked the reason behind bypassing the facility. Unavailability of medicines (accounting for 29.0%) was reported to be the main reason why individual patients bypassed the nearest facility to their homes (Table 4.21). This was followed by two other key reasons - lack of bed (19.1%) and lack of qualified staff (18.9%) at the nearest inpatient facility. This is consistent with the previous survey, where the top two reasons for bypassing facility were reported to be unavailability of pharmaceutical supplies (33.0%) and unqualified health staff (26.0%) in the closest inpatient health facility. Other important reasons reported include long waits for an appointment (9.0%), and unfriendly staff (7.7%), which is once again consistent with the finding of the previous survey.

Table 4.21 Reasons Reported for Bypassing the Nearest Inpatient Health Facility

| Reason | Percent |
|--|---------------|
| Unfriendly staff | 7.7% |
| Long waiting time | 9.0% |
| Medicine unavailable | 29.0% |
| Staff are unqualified | 18.9% |
| More expensive services | 3.0% |
| Dirty facility | 1.6% |
| Would have paid (facility didn't sign agreement with insurance scheme) | 2.9% |
| Would have paid (facility doesn't accept waiver system users) | 1.5% |
| Would have paid (facility doesn't provide exempted service) | 2.9% |
| No privacy | 2.1% |
| Facility closed (at the time) | 0.2% |
| Facility not in operation | 2.1% |
| No bed | 19.1% |
| Other | 0.0% |
| Total | 100.0% |

4.3.4 Distance Traveled to Obtain Inpatient Health Services

Table 4.22 presents distance traveled to reach inpatient health services and return home (round trip). As expected, inpatient health service users traveled longer distances on average to seek care (88.8 kilometers) compared with outpatient health care users (27.8 kilometers). These figures were 75.6 kilometers and 17 kilometers respectively in the previous survey. The increase in reported kilometers travelled to use inpatient care, despite expanding inpatient facilities, could be due to the challenge of estimating kilometers accurately, particularly in rural areas where facilities are spread further apart and travel is longer. The majority (60.0%) of inpatient health seekers reported traveling over 15 kilometers to access health service providers, again, a slight increase from the figure reported in the previous survey (57.7%).

Table 4.22 Distance Travelled to Receive Inpatient Care

| Distance to Facility (Roundtrip) | Rural | Urban | Total |
|-------------------------------------|-------------|-------------|-------------|
| 0 – 1 KM | 2.1% | 14.0% | 5.5% |
| 1.001 – 5 KM | 4.5% | 30.1% | 11.8% |
| 5.001 – 10 KM | 14.0% | 25.1% | 17.2% |
| 10.001 – 15 KM | 6.5% | 2.7% | 5.5% |
| Greater than 15 KM | 72.8% | 28.0% | 60.0% |
| Average kilometers travelled | 88.8 | 34.2 | 73.2 |

The majority of individuals in urban areas (69.2%) traveled shorter distances (less than 10 kilometers) to use inpatient health services in the 12 months preceding the survey. In contrast, 72.8% of individuals in rural areas had to travel more than 15 kilometers to obtain health services from an inpatient health facility.

4.3.5 Patient Satisfaction with Inpatient Health Services

Table 4.23 shows that 88.3% of the individuals admitted to health facilities reported that they were satisfied with the inpatient health services they received (very close to satisfaction rates for outpatient care). However, satisfaction in inpatient services varied by economic status: individuals in the richest households (83.4%) were less likely to be satisfied with the inpatient health services they had obtained than individuals living in the poorest households (93.4%). This is consistent with the patients' satisfaction with outpatient health services in this and previous survey. However, the finding of the current report contrasts with that of the previous survey where patients from the wealthiest households were more likely to report being satisfied.

Table 4.23: Patient Satisfaction with Inpatient Health Services by Wealth Status

| Wealth quintiles | Is patient satisfied with inpatient services received? | | | Total |
|------------------|--|--------------|-------------|---------------|
| | Yes | No | Don't know | |
| Poorest | 93.4% | 6.6% | 0.0% | 100.0% |
| Q2 | 85.3% | 14.2% | 3.5% | 103.0% |
| Q3 | 89.1% | 10.9% | 0.0% | 100.0% |
| Q4 | 96.2% | 2.1% | 1.8% | 100.0% |
| Richest | 82.8% | 15.8% | 1.5% | 100.0% |
| Total | 87.6% | 11.1% | 1.3% | 100.0% |

The level of patient's satisfaction was also evaluated for the different aspects of services provided by inpatient facilities. Table 4.24 presents patient satisfaction ratings for selected indicators of quality of care. Overall, 80% or more of inpatient service users rated each aspect of inpatient care as 'good' or 'very good', with the exception of food quality, which about 70% of inpatient users rated as 'good' or 'very good'. Quality of care indicators such as facility cleanliness, courtesy of staff, skills of providers and time spent with the clinician were rated as 'good' or 'very good' by over 90% of inpatient service users. On the other hand, service quality indicators such as food quality, availability of drugs, availability of laboratory/diagnostics and waiting time were rated as 'good' or 'very good' by less than 85% of inpatient service users.

Table 4.24 Patient Satisfaction by Major Reasons for Satisfaction

| | Level of patient's satisfaction (%) | | | | | Total |
|---------------------------------|-------------------------------------|-----------|---------------|----------------------|-------------|---------|
| | Very satisfied | Satisfied | Not satisfied | Not at all satisfied | Do not know | |
| Time spent with the clinician | 34.30% | 55.90% | 7.10% | 0.70% | 2.10% | 100.00% |
| Waiting time | 30.70% | 53.80% | 11.40% | 1.60% | 2.60% | 100.00% |
| Courtesy of staff | 31.20% | 59.40% | 5.90% | 1.00% | 2.60% | 100.00% |
| Availability of drugs | 26.50% | 53.60% | 16.00% | 1.00% | 3.00% | 100.00% |
| Availability of lab/diagnostics | 25.10% | 56.50% | 10.80% | 2.00% | 5.70% | 100.00% |
| Cleanliness | 29.60% | 61.40% | 6.00% | 0.40% | 2.60% | 100.00% |
| Bed linen | 25.40% | 60.00% | 11.20% | 0.90% | 2.60% | 100.00% |
| Food quality | 19.20% | 51.50% | 10.10% | 2.60% | 16.60% | 100.00% |
| Consultation privacy | 26.40% | 62.90% | 3.60% | 0.90% | 6.20% | 100.00% |
| Motivation of staffs | 25.30% | 64.50% | 6.80% | 0.90% | 2.60% | 100.00% |

Chapter 5. Household Health Expenditure

Households as a source for health financing in Ethiopia contribute in three major ways: OOP expenditure, community contributions to support the health sector, and premium payments for health insurance schemes. Total OOP expenditures and insurance premium payments are reviewed in this chapter, and consist of expenditures on outpatient, inpatient, and routine health expenses. Community contributions are explained in more detail in the next chapter.

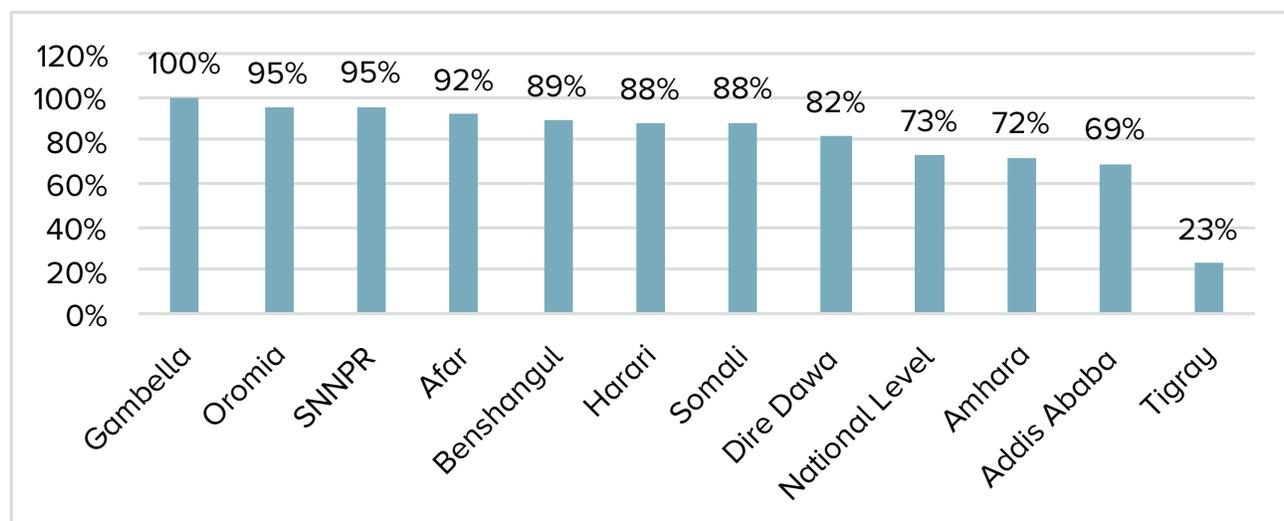
To generate the outpatient expenditure, households were requested to report illness visits made to a health provider in the four weeks preceding the survey and the amount of money paid for each visit. A sum of payments was then calculated and annualized to obtain household expenditure on outpatient services. The same methodology was adopted to generate annual expenditures for routine expenses.

In the case of households' inpatient expenditure, information on all admissions in the last 12 months was collected, including the corresponding expenditures for each admission. A sum of expenditures for all admissions was estimated to give the total household expenditure for inpatient services.

5.1 Payment for Health Services and Reasons for Not Paying

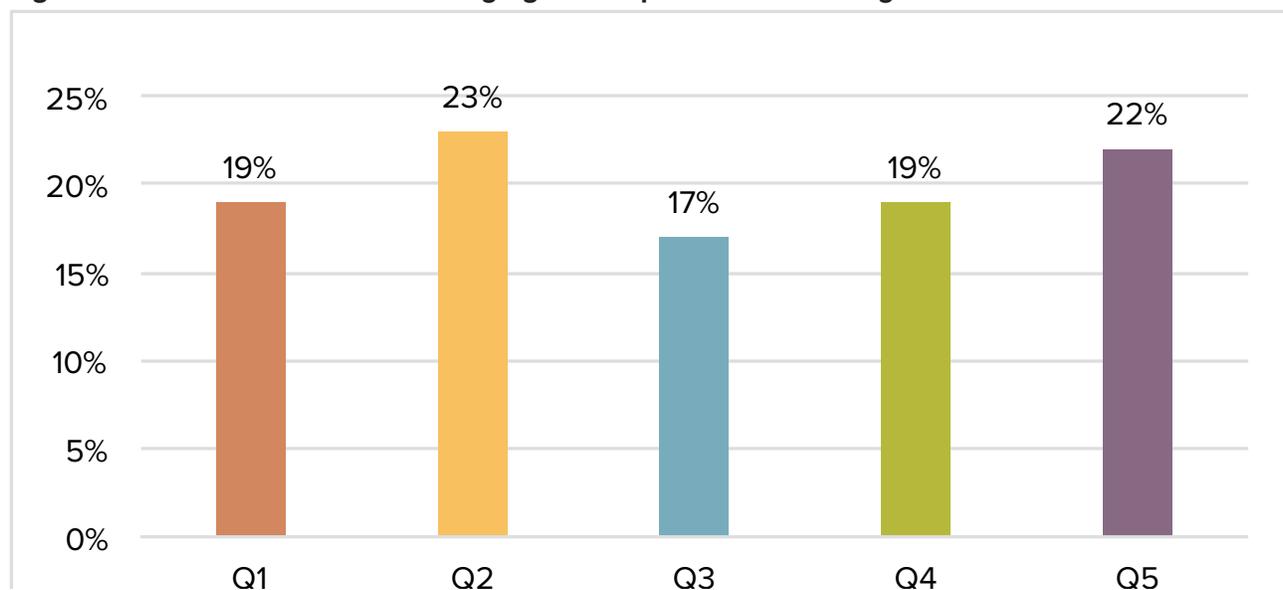
Of the total survey population that sought outpatient care during the survey period, about 73% paid for health services that they received from health providers. There is a very high regional variation in those reporting paying, ranging from the highest in Gambella (100%) to the lowest in Tigray (23%). The only other regions with lower than the national average were Amhara (72%) and Addis Ababa (69%), which were not too far from the national average (figure 5.1).

Figure 5.1 Percentage of Individuals Paying for Outpatient Services by Region



When we explore the proportion of people that paid for health services by income quintiles, the data does not show a clear pattern. Only 19% of the very poor (Q1) paid for services, which was similar to Q4 but higher than Q3 (figure 5.2).

Figure 5.2 Percent of Individuals Paying for Outpatient Services by Economic Quintiles



Further analysis of those who paid for the health services by their insurance status, showed that 87% of those that paid for health services were not members of any type of insurance and paid OOP, while only 12% of those who paid for services reported that they were members of insurance schemes. Of the insurance members, 42% of them paid money to seek care that was in addition to their premiums (table 5.1). These include payments for transport and accommodation, which are not part of the insurance benefit package (see the details in chapter 7).

Table 5.1 Percentage of Individuals Paying for Outpatient Services by Insurance Membership

| Membership status | % of People Paying OOP | % Not paying OOP | Total (%) |
|----------------------------|------------------------|------------------|-------------|
| Insurance Members | 42% | 58% | 12% |
| No Membership of insurance | 78% | 22% | 87% |
| Do not know | - | - | 1% |
| Total | 73% | 27% | 100% |

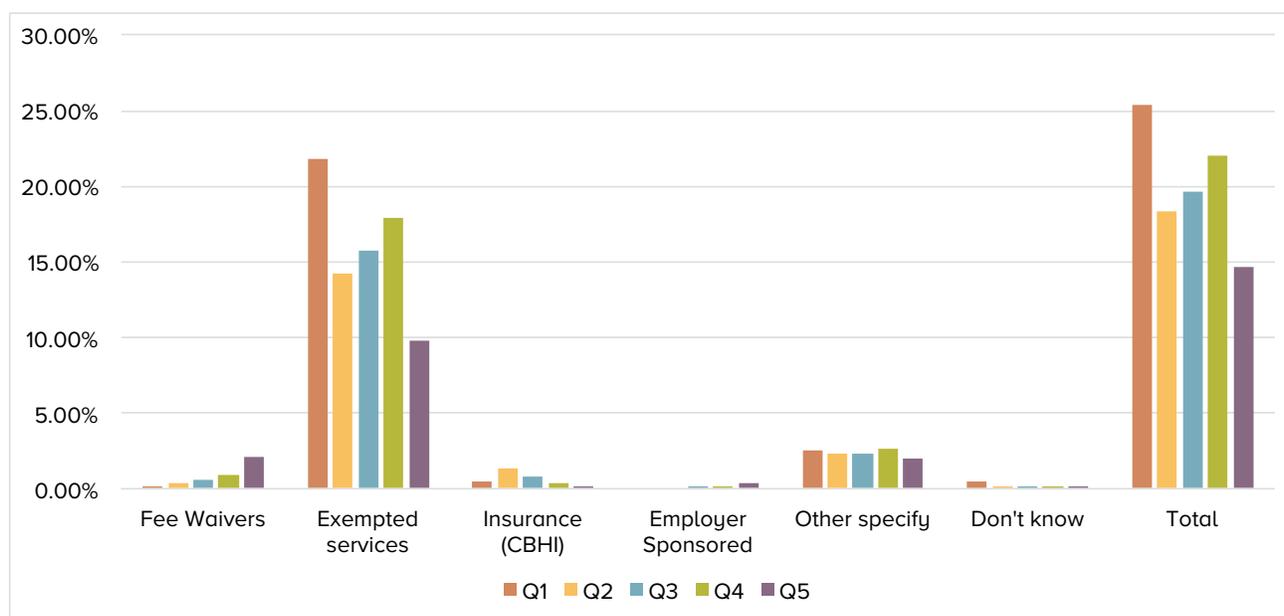
When we explore the 27% of individuals that did not pay for services, 80% did not pay due to the fact that they accessed exempted services; a further 4% did not pay because they are financed as fee waiver beneficiaries, another 3% because they are members of CBHI, and about 12% did not specify the cause of non-payment. If we explore further by region, most of the shares of exempted services were observed in Tigray, SNNPR, Oromia and Amhara (see Table 5.2)

Table 5.2 Percent of People Not Paying for Outpatient and Inpatient Services by Major Reasons for Not Paying by Region, Income Quintile and Insurance Status

| | Fee Waiver | Exempted services | Insurance (CBHI) | Employer Sponsored | Others (not specified and don't know) |
|-------------------|--------------|-------------------|------------------|--------------------|---------------------------------------|
| Addis Ababa | 2% | 3% | 0% | 0% | 0% |
| Afar | 0% | 0% | 0% | 0% | 0% |
| Amhara | 1% | 8% | 2% | 0% | 3% |
| Benishangul Gumuz | 0% | 1% | 0% | 0% | 0% |
| Dire Dawa | 0% | 0% | 0% | 0% | 0% |
| Gambella | 0% | 0% | 0% | 0% | 0% |
| Harari | 0% | 0% | 0% | 0% | 0% |
| Oromia | 0% | 10% | 0% | 0% | 4% |
| SNNPR | 0% | 11% | 0% | 0% | 1% |
| Somali | 0% | 1% | 0% | 0% | 0% |
| Tigray | 0% | 44% | 0% | 0% | 2% |
| Total | 4.14% | 80.15% | 3.23% | 0.6% | 12% |

When the percent of people not paying for services is explored by different reasons of not paying by income quintiles, 22% of the very poor (Q1) did not pay due to exempted services, which is higher than all other quintiles. However, this survey shows that the very poor (Q1) were not the highest beneficiaries of fee waivers (in fact the wealthiest households appear to be the highest beneficiaries), indicating the probability that there are significant challenges in targeting fee waivers -reflected in leakage of support to those other than the very poor.

Figure 5.3: Reasons for Not Paying for Health Services by Income Quintiles



Among the surveyed people who paid for services, all of them reported paying in cash. The survey data documented that there were no health providers that were receiving any payment in the form of in-kind payment.

5.2 Estimates of Per Capita Out of Pocket Spending

Households who had sought care were requested to provide information on how much they spent on various categories of health spending when they visited health facilities during care seeking, including both health related and non-health related expenditures. The total OOP spending was estimated to be 18.2 billion ETB, of which 45% was for drugs and medical supplies; while 16% was for diagnosis and investigation. The third most important category was food and accommodation expenditures (12%), including for those that are accompanying the patient. Of the total OOPs, about 17.5 billion ETB (96%) was spent on outpatient services, while the remaining 711.6 million (4%) was on inpatient services. Table 5.3 shows the estimated spending by different categories of spending. Further analysis of OOP spending by expenditure categories shows that 70% of total OOP spending was on health services, while 22% was for bed, accommodation and transport, and the remaining 7% was not specified. Analysis of the composition of spending shows that about 45% of the total OOP spending is incurred for drugs and medical supplies, followed by diagnostics (16%). The registration and consultation expenditures accounted for only about 9% of the total OOP spending (see table 5.3).

Table 5.3: Estimated Inpatient and Outpatient OOPs by Expenditure Category and Region

| | Outpatient OOP | | Inpatient OOP | | Total OOP | |
|----------------------------------|-----------------------|-------------|--------------------|-------------|-----------------------|-------------|
| | Amount (ETB) | Share (%) | Amount (ETB) | Share (%) | Amount (ETB) | Share (%) |
| By expenditure categories | | | | | | |
| Registration/Consultation | 1,666,453,293 | 10% | 8,653,191 | 1% | 1,675,106,484 | 9% |
| Drugs and medical supplies | 7,839,667,066 | 45% | 303,658,655 | 43% | 8,143,325,721 | 45% |
| Surgical operation | | | 63,029,148 | 9% | 63,029,148 | 0% |
| Diagnosis and imaging | 2,882,230,539 | 16% | 51,841,724 | 7% | 2,934,072,263 | 16% |
| Bed /accommodation | 2,096,167,665 | 12% | 135,847,293 | 19% | 2,232,014,958 | 12% |
| Transport | 1,834,146,707 | 10% | 59,932,629 | 8% | 1,894,079,336 | 10% |
| Other (non specified) | 1,184,334,731 | 7% | 88,700,291 | 12% | 1,273,035,022 | 7% |
| Total | 17,503,000,000 | 100% | 711,662,932 | 100% | 18,214,662,932 | 100% |
| By Region | | | | | | |
| Tigray | 512,000,000 | 3% | 52,800,000 | 7% | 564,800,000 | 3% |
| Afar | 335,000,000 | 2% | 3,910,545 | 1% | 338,910,545 | 2% |
| Amhara | 2,320,000,000 | 13% | 65,600,000 | 9% | 2,385,600,000 | 13% |
| Oromia | 8,740,000,000 | 50% | 222,000,000 | 31% | 8,962,000,000 | 49% |
| Somali | 880,000,000 | 5% | 38,800,000 | 5% | 918,800,000 | 5% |
| Benishangul Gumuz | 327,000,000 | 2% | 12,000,000 | 2% | 339,000,000 | 2% |
| SNNPR | 1,610,000,000 | 9% | 134,000,000 | 19% | 1,744,000,000 | 10% |
| Gambella | 71,500,000 | 0% | 1,558,262 | 0% | 73,058,262 | 0.41% |
| Harari | 89,300,000 | 1% | 6,894,125 | 1% | 96,194,125 | 1% |
| Addis Ababa | 2,540,000,000 | 15% | 135,000,000 | 19% | 2,675,000,000 | 15% |
| Dire Dawa | 78,200,000 | 0% | 39,100,000 | 5% | 117,300,000 | 1% |
| Total | 17,503,000,000 | 100% | 711,662,932 | 100% | 18,214,662,932 | 100% |

The total per capita OOP expenditure of households for health is estimated at 231 ETB per year. Of this, on average 222 ETB per capita was for outpatient services and 9 ETB was for inpatient services (Table 5.4). The reason for the lower inpatient per capita expenditure as compared to outpatient service visit is the very low incidence of admission

compared to the outpatient services visits (637,000 for inpatient admissions compared with 4 million outpatient visits). Of the total people who sought care during the survey period, only 16% accessed inpatient care. The mean outpatient and inpatient OOP spending for each of the incidences/contacts of utilization was 392 ETB and 1,916 ETB respectively.

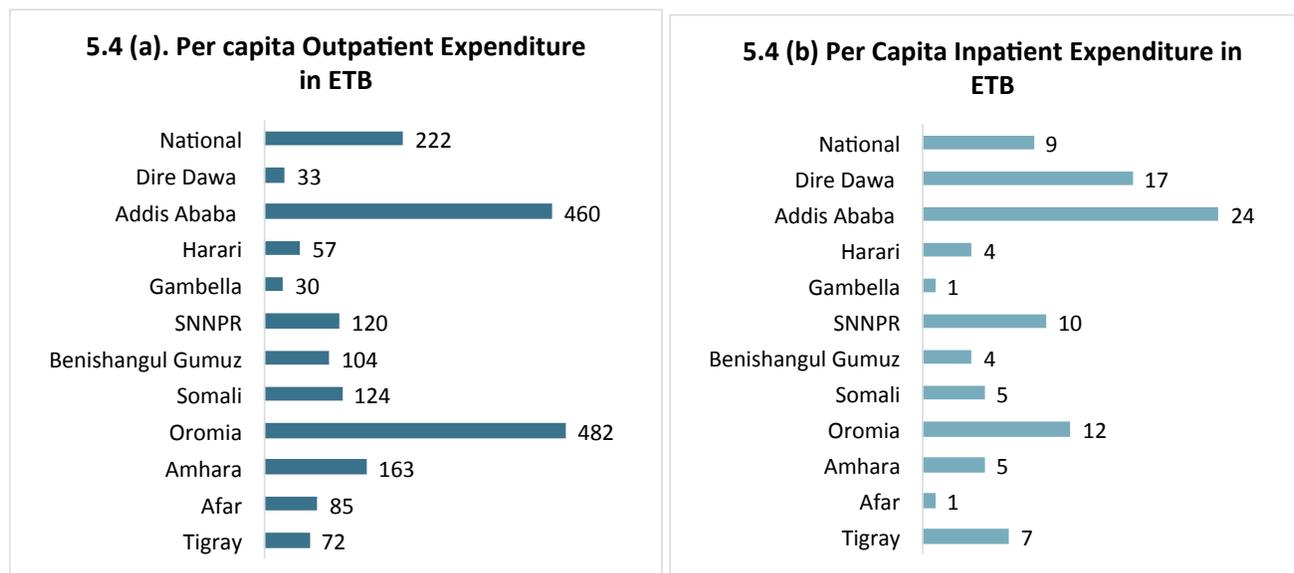
Table 5.4: Per Capita Outpatient and Inpatient OOP by Residence, Region and Wealth Quintile

| | Per capita Outpatient Expenditure | | Per capita Inpatient Expenditure | | Per capita total expenditure | | |
|------------------------|-----------------------------------|-------------|----------------------------------|------------|------------------------------|-------------|--|
| | ETB | USD | ETB | USD | ETB | USD | |
| Residence | | | | | | | |
| Rural | 191 | 8.8 | 7.8 | 0.36 | 199 | 9.2 | |
| Urban | 341 | 15.8 | 14 | 0.6 | 355 | 16.4 | |
| Total | 231 | 10.7 | 9 | 0.4 | 231 | 10.7 | |
| By Region | | | | | | | |
| Tigray | 72 | 3.4 | 7 | 0.4 | 80 | 3.7 | |
| Afar | 85 | 4.0 | 1 | 0.1 | 86 | 4.0 | |
| Amhara | 163 | 7.6 | 5 | 0.2 | 168 | 7.8 | |
| Oromia | 482 | 22.4 | 12 | 0.6 | 494 | 23.0 | |
| Somali | 24 | 5.8 | 5 | 0.3 | 129 | 6.0 | |
| Benishangul Gumuz | 104 | 4.8 | 4 | 0.2 | 108 | 5.0 | |
| SNNPR | 120 | 5.6 | 10 | 0.5 | 130 | 6.1 | |
| Gambella | 30 | 1.4 | 1 | 0.0 | 31 | 1.4 | |
| Harari | 57 | 2.6 | 4 | 0.2 | 61 | 2.8 | |
| Addis Ababa | 460 | 21.4 | 24 | 1.1 | 485 | 22.6 | |
| Dire Dawa | 33 | 1.5 | 17 | 0.8 | 50 | 2.3 | |
| National | 222 | 10.3 | 9 | 0.4 | 231 | 10.8 | |
| Wealth Quintile | | | | | | | |
| Q1 (The very poor) | 154.80 | 7.2 | 7.7 | 0.4 | 162.5 | 7.5 | |
| Q2 (The poor) | 213.70 | 9.9 | 8.9 | 0.4 | 227.7 | 10.5 | |
| Q3 (Lower middle) | 228.30 | 10.6 | 8 | 0.4 | 236.3 | 10.9 | |
| Q4 (Upper middle) | 154.1 | 7.1 | 6.8 | 0.3 | 161 | 7.4 | |
| Q5 (The rich) | 359.00 | 16.6 | 13.7 | 0.6 | 372.7 | 17.2 | |

There is a significant variation among regions on the per capita outpatient and inpatient OOP expenditures. In terms of per capita outpatient expenditure, Oromia and Addis Ababa are way higher than the national average with 482 ETB and 460 ETB per capita respectively. Further analysis of the data shows that these two regions had higher bypassing rates of nearest primary health care facilities (Oromia 35%; Addis Ababa 30%) and higher use of private facilities (Oromia 37%; Addis Ababa 20%, Amhara 8% and Tigray 3%), which have higher fee rates than the lower PHC and public health facilities. This may explain to some degree the higher expenditures in Oromia and Addis Ababa as compared to other regions. When we break down the OOPs by residence, the average per capita OOP is 77% higher for urban areas, with 355 ETB per capita, compared with the rural areas (200 ETB) as shown on table 5.4.

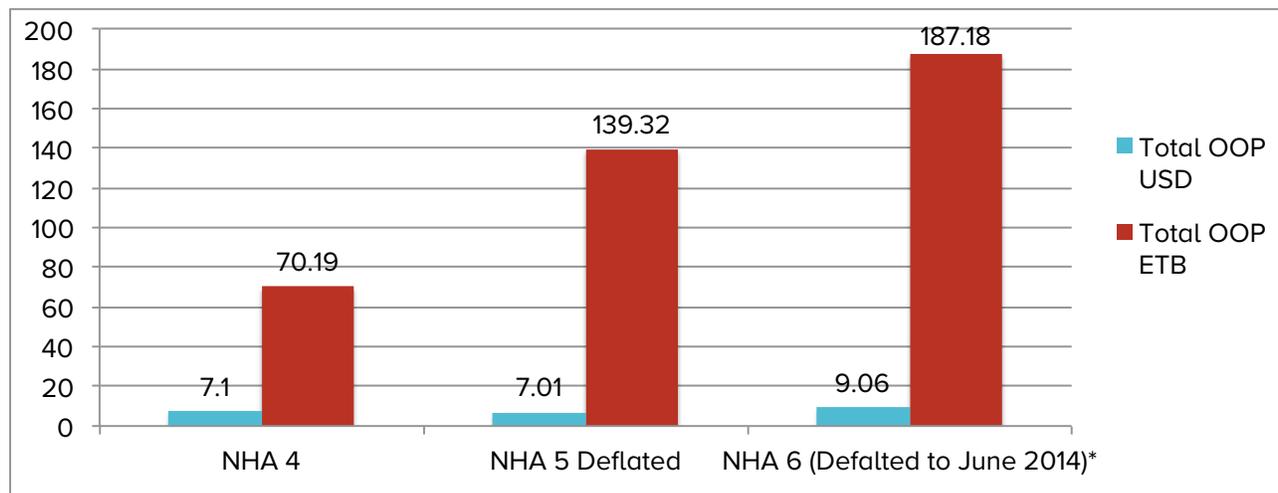
An analysis of the out of pocket spending by expenditure quintiles show that average per capita outpatient OOPs increased as one goes from lower to higher expenditure quintiles, with the exception of Q4 (table 5.4).

Figure 5.4 (a and b): per capita outpatient and inpatient OOP by region



The estimated per capita OOP spending has increased by 34% compared with the HA V household survey result, increasing from 139 ETB to 187 ETB. This is less of an increase compared to the 69% increase in per capita OOP spending between HA 4 and 5. However, the total per capita OOP in USD increased by only 29% between HA 5 and the current HA 6 (Figure 5.5). This could be caused by a depreciation of the Ethiopian Birr, and the increased cost of mainly imported drugs and medical supplies associated with the increasing burden of communicable diseases (documented in the preceding section).

Figure 5.5 Comparison of Estimated OOP Spending Among the Three Available HA HH Surveys



* The NHA 6 is being prepared using the latest available audited government expenditures, 2013/14. This OOP estimate therefore needs to be deflated to the same period for consolidation.

Analysis of which type of providers households paid for the services they received show that 50% of the total OOP spending was paid to government hospitals and health centers. The share of private-for-profit and private-not-for-profit providers is estimated at 47% and 1% respectively (See table 5.5).

Given that government health facilities provided 75% and 78% of the total outpatient and inpatient services covered in this survey respectively, compared to 20.1% and 20.5% in the private sector (see the preceding sections), the analysis demonstrates that private health providers are much more expensive than public health facilities.

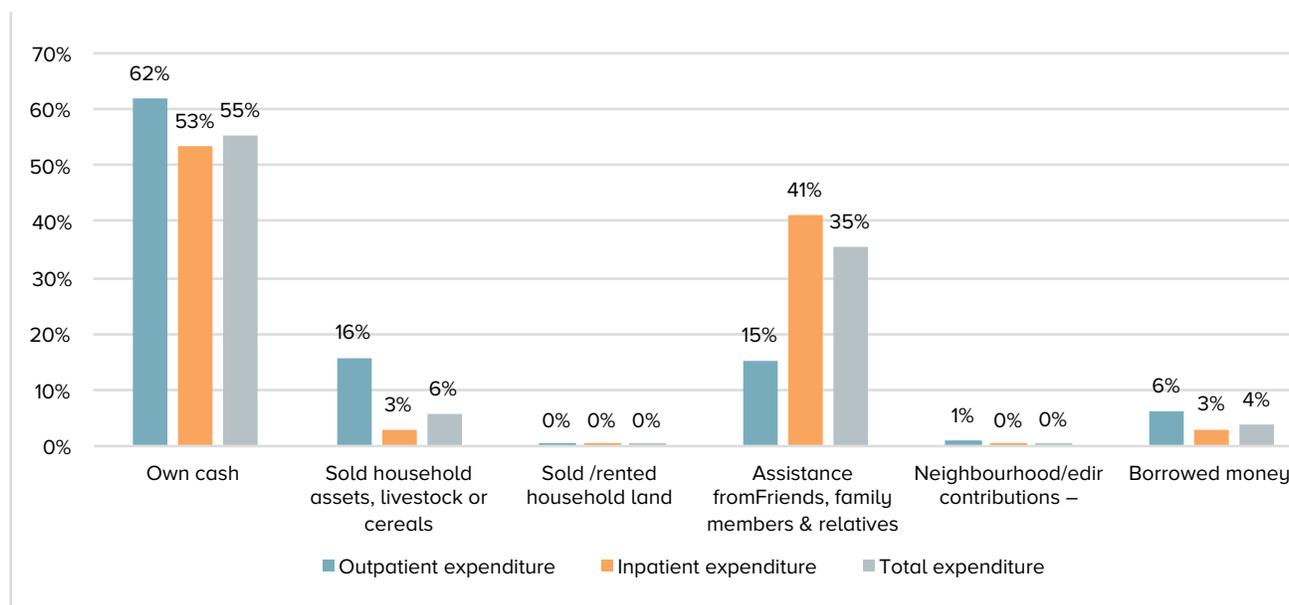
Table 5.5 Outpatient, Inpatient and Total OOP Spending by Health Provider Type

| Provider Type | Outpatient OOP | | Inpatient OOP | | Total OOP | |
|---------------------------------|-----------------------|-------------|--------------------|-------------|-----------------------|-------------|
| | Amount (ETB) | Share (%) | Amount (ETB) | Share (%) | Amount (ETB) | Share (%) |
| Govt. Hospital | 6,275,378,640 | 36% | 454,343,933 | 64% | 6,729,722,573 | 37% |
| Private hospital | 2,568,108,775 | 15% | 138,799,575 | 20% | 2,706,908,350 | 15% |
| Not for profit hospital | 78,841,939 | 0% | 7,350,511 | 1% | 86,192,450 | 0% |
| Govt. Health Centre | 2,428,211,799 | 14% | 26,461,789 | 4% | 2,454,673,588 | 13% |
| Govt. health post ¹⁰ | 128,905,071 | 1% | - | 0% | 128,905,071 | 1% |
| Not for profit health centre | 112,916,845 | 1% | 1,579,069 | 0% | 114,495,914 | 1% |
| Private Clinic | 5,495,952,631 | 31% | 80,184,215 | 11% | 5,576,136,846 | 31% |
| NGO Clinic | 2,987,486 | 0% | - | 0% | 2,987,486 | 0% |
| Company/parastatal clinic | - | 0% | - | 0% | - | 0% |
| Pharmacy/ Drugstore | 142,894,768 | 1% | - | 0% | 142,894,768 | 1% |
| Traditional healer / religious | 233,827,803 | 1% | - | 0% | 233,827,803 | 1% |
| TBA | - | 0% | - | 0% | - | 0% |
| Other (specify) | 34,974,244 | 0% | 2,943,840 | 0% | 37,918,084 | 0% |
| Total | 17,503,000,000 | 100% | 711,662,932 | 100% | 18,214,662,932 | 100% |

5.3 Expenditure by Sources of Household Financing Mechanisms

Analysis of the financing source for OOP spending shows that there were two main sources of funding for households – the household itself on one hand, and friends and family members on the other. About 55% of the total OOP spending was financed through the household’s own cash, while another 6% was financed through selling the household’s own livestock and cereals. The second major source of financing was assistance from friends and family members, serving as the source for 35% of total OOP spending. Borrowing money sourced the remaining 4% of OOP expenditure. Households were more likely to pay for outpatient care through their own funds, and more likely to receive assistance from friends and family to pay for inpatient care (see figure 5.6).

Figure 5.6: Sources of Funding of OOP Health Expenditure



5.4 Out of Pocket Spending by Health Service Functions

The survey asked households about what services their OOP spending was used to pay for during health service provision. Overall, of the total OOP spending, infections and parasitic disease prevention and treatment stand out as the major area of spending, with 37% of total OOP spending going to these services (see figure 5.7 and Table 5.6). As can be seen in table 5.6, the major illnesses paid for with OOP spending were intestinal worms, disease of respiratory infection including pneumonia, malaria, and diarrhea, resulting in about 85% of OOP spending going towards infectious and parasitic disease treatment. The second major functional areas where OOPs were spent, other than those not specified, were non-communicable diseases (NCDs). NCDs are emerging as one of the major disease burdens in the country, accounting for about 23% of the total OOP expenditures. Of the NCDs, the major sources of OOP spending were kidney related infections and failures, mental disorders and cancer. The next major source of OOP spending was the provision of preventive and promotive services. These primary care services account for about only 7% of the total OOP spending borne by households. The main promotive services paid for through OOP payments were family planning, physical check up, and dental services. A new area of spending documented in the current HH survey was OOP spending on nutrition related services. The survey documented that, excluding routine costs included as part of the community contributions, households spent about 116.9 million ETB on nutrition related services¹², accounting for only 1% of the total OOP spending.

¹² The nutrition services here are defined as those payments related to direct and indirect cost of addressing Nutritional deficiencies (severe malnutrition). The type of services to be included was given by the nutrition experts during the development of the questionnaire.

Figure 5.7 The Share of OOP Spending by Major health Service Categories Provided as Outpatient, Inpatient and Total

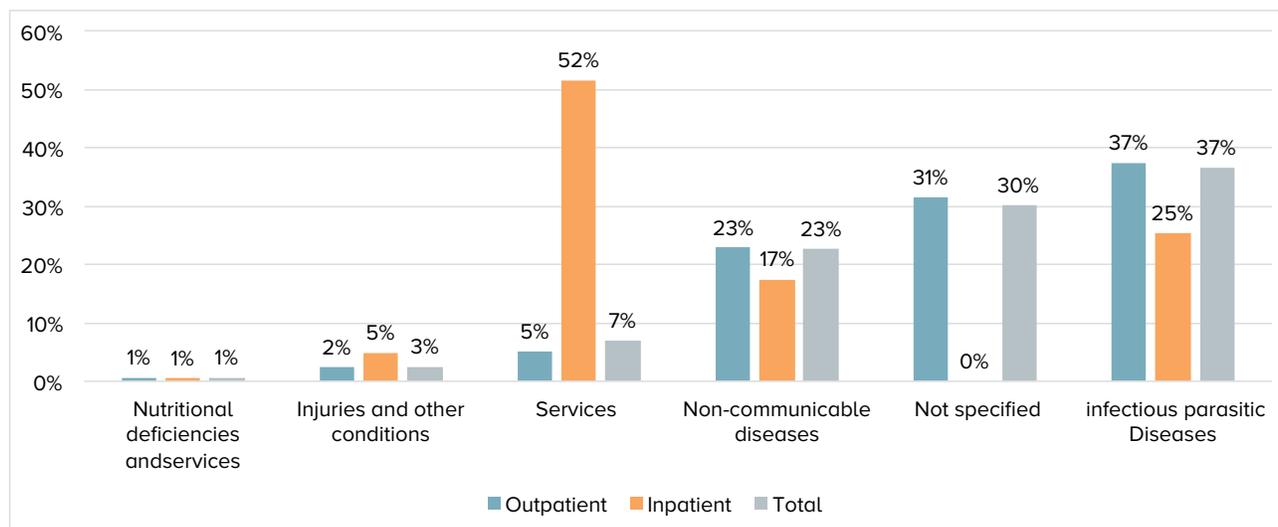


Table 5.6 OOP Expenditure by Different Service Categories

| Service Types | Outpatient OOP | | Inpatient OOP | | Total OOP | |
|---|------------------|--------------|------------------|------------------|------------------|------------------|
| | Total OOP in ETB | Share in (%) | Total OOP in ETB | Share in Percent | Total OOP in ETB | Share in Percent |
| Infectious and Parasitic Diseases | | | | | | |
| Malaria | 1,290,000,000 | 7% | 22,800,000 | 3% | 1,312,800,000 | 7% |
| Diseases of Respiratory including pneumonia | 1,360,000,000 | 8% | 44,400,000 | 6% | 1,404,400,000 | 8% |
| TB | 519,000,000 | 3% | 34,300,000 | 4% | 553,300,000 | 3% |
| HIV/AIDS | 42,000,000 | 0% | - | | 42,000,000 | 0% |
| Diarrhoea | 798,000,000 | 5% | 10,600,000 | 1% | 808,600,000 | 4% |
| Intestinal worms | 2,060,000,000 | 12% | 42,900,000 | 5% | 2,102,900,000 | 12% |
| Vaccine preventable diseases | 19,500,000 | 0% | 1,206,804 | 0% | 20,706,804 | 0% |
| Neglected tropical diseases | 173,000,000 | 1% | 6,159,130 | 1% | 179,159,130 | 1% |
| Other infectious and parasitic diseases | 232,000,000 | 1% | 36,600,000 | 5% | 268,600,000 | 1% |
| | | | | | | |
| Nutritional deficiencies (severe malnutrition) | 96,200,000 | 1% | 4,373,267 | 1% | 100,573,267 | 1% |
| | | | | | | |
| Non-communicable diseases | | | | | | |
| Cancer | 926,000,000 | 5% | 37,400,000 | 5% | 963,400,000 | 5% |

| | | | | | | |
|--------------------------------------|----------------|------|-------------|------|----------------|------|
| Diabetics | 278,000,000 | 2% | 14,300,000 | 2% | 292,300,000 | 2% |
| Kidney failure | 1,720,000,000 | 10% | 40,000,000 | 5% | 1,760,000,000 | 10% |
| Mental disorders | 1,050,000,000 | 6% | 45,100,000 | 6% | 1,095,100,000 | 6% |
| | | | | | | |
| Injuries and other conditions | 418,000,000 | 2% | 38,900,000 | 5% | 456,900,000 | 3% |
| | | | | | | |
| Services | | | | | | |
| Physical check-up (prevention) | 502,700,000 | 3% | 22,300,000 | 3% | 525,000,000 | 3% |
| Immunizations (prevention) | 46,100,000 | 0% | 7,241,035 | 1% | 53,341,035 | 0% |
| Family planning (prevention) | | | | | | 0% |
| Oral contraceptives | 118,000,000 | 1% | 5,015,864 | 1% | 123,015,864 | 1% |
| Condoms | 1,014,547 | 0% | 2,666,421 | 0% | 3,680,968 | 0% |
| Intrauterine device | 4,977,297 | 0% | - | 0% | 4,977,297 | 0% |
| Injectable | 12,500,000 | 0% | 5,313,977 | 1% | 17,813,977 | 0% |
| Norplant | 15,800,000 | 0% | 361,000,000 | 46% | 376,800,000 | 2% |
| Sterilization | 4,977,297 | 0% | - | 0% | 4,977,297 | 0% |
| Delivery | 23,000,000 | 0% | | | 23,000,000 | 0% |
| Dental | 117,000,000 | 1% | - | 0% | 117,000,000 | 1% |
| Circumcision | 308,730 | 0% | - | 0% | 308,730 | 0% |
| Physiotherapy | 42,800,000 | 0% | - | 0% | 42,800,000 | 0% |
| Nutrition supplements | | 0% | | 0% | | 0% |
| Vitamins/minerals | 13,700,000 | 0% | - | 0% | 13,700,000 | 0% |
| Micronutrient powder | 2,582,845 | 0% | - | 0% | 2,582,845 | 0% |
| Baby formula | | 0% | | 0% | | 0% |
| Not specified Services | 5,460,000,000 | 31% | - | 0% | 5,460,000,000 | 30% |
| Total | 17,347,160,716 | 100% | 782,576,498 | 100% | 18,129,737,214 | 100% |

Chapter 6. Community Contribution to Health Systems Development

The second major role that households play as a source of financing for the health system, apart from OOP spending, is their contribution to health system strengthening in Ethiopia. The success of the Ethiopian health system in meeting some of the international goals and targets in health has been explained by the strategy used to ensure communities produce their own health through the health extension program (HEP) and its associated health development army (HDA) and malaria control programs. Community members contribute their labor, time, food, and in some cases money to contribute to the implementation of the different health extension packages.

The estimation of community contributions included in this survey is the first of its kind in estimating the contribution of communities to health, outside OOPs. There has not been any experience documented of such an exercise in a HA process in other countries either. Consequently, the tools used for this survey are not part of the international experience, and were not as tested as the other components of the HH survey, either in the Ethiopian context or elsewhere. To generate the outpatient expenditure on routine health spending and community contributions, two different methodologies were used. Households were requested to identify the type of services they pay for routine services in the four weeks preceding the survey and the amount of money paid for each service. A sum of these payments were then calculated and annualized to obtain household expenditure on annual expenditures for routine expenses.

In this survey, each household was asked whether a member of the household is involved in the HDA and if so, the amount of time they spent on average on HDA/Malaria control program per week, which was then annualized per year. The local wage rates, collected as part of this survey, were used to convert the time spent on HDA and malaria control into monetary contributions. Communities also contribute crops and coffee to health facilities for the preparation of culturally acceptable food and ceremony after facility deliveries. They also contribute to the rehabilitation and construction of health facilities and maternity waiting homes. Hence households were also requested to provide information on how much time, foodstuffs, and money they contributed to such efforts. These contributions were also monetized. The summation of HDA, Malaria control, facility construction and rehabilitation, and delivery related activities provided the total community contributions to strengthen the health system in Ethiopia.

6.1. Health Development Army

Overall, 90% of the households in the survey reported that members of their HHs are in the HDA. Some of the regions that are contributed in the form of social mobilization are also reported to be members of the HDA and included as so. While it is documented in the routine health information system that Tigray, Amhara, Oromia and SNNPR have better HDA participation the findings from this survey indicate that other regions, including Addis Ababa, Benishangul Gumuz and Harari have a higher HDA membership rate than these well-performing regions (see Table 6.1).

Table 6.1 Percent of HHs Surveyed Who Report Having a HH Member in the HDA by Region

| | One HDA member in HH | No HDA member in HH | Share from national |
|-------------------|----------------------|---------------------|---------------------|
| Addis Ababa City | 100% | 0% | 2% |
| Amhara | 90% | 10% | 32% |
| Benishangul Gumuz | 100% | 0% | 2% |
| Dire Dawa | 98% | 2% | 4% |
| Gambella | 62% | 38% | 0% |
| Harari | 100% | 0% | 1% |
| Oromia | 86% | 14% | 17% |
| SNNPR | 86% | 14% | 24% |
| Tigray | 93% | 7% | 18% |
| Total | 90% | 10% | 100% |

6.2. Involvement in Malaria Control Program

Households were also asked to provide information on whether a member of the household was involved in Malaria control activities. Of the surveyed population, about 39% of the HHs were involved in long-lasting insecticide treated net (LLITN) distribution, indoor residual spraying (IRS) operations, pond drainage, and awareness creation about controlling malaria epidemics (table 6.2).

Table 6.2 Percent of HHs Involved in Malaria Prevention Operations

| | Yes | | No | |
|---------------------------------|-----------|------|-----------|-------|
| | Frequency | % | Frequency | % |
| Is the household involved LLITN | 459,409 | 38.8 | 723,355 | 61.2% |

6.3 Estimates of Community Contribution in Monetary Terms to Health System Strengthening

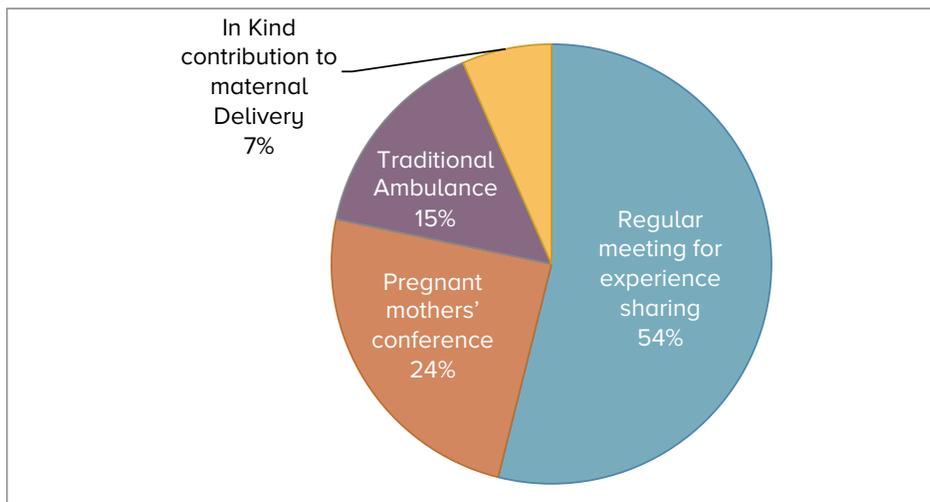
The total community contribution to health system strengthening is estimated to be 2.87 billion ETB for 2015/16, which is equivalent to 36.41 ETB per capita. Of this, about 55% or 19.86 ETB per capita was contributed through the HDA. The remaining 45% was contributed through the malaria control program, as shown in table 6.3. The effort to estimate the community's contribution towards facility construction and rehabilitation was not successful, as most HHs did not respond to the survey questions regarding this activity. This might be due to the fact that most of the health facilities (health posts and health centers) were constructed well before the survey, and community labor for construction was not needed during the period data was requested for.

Table 6.3 Estimated Community Contributions to Health System Strengthening

| | Estimated contribution by different Health Development Army Activities in ETB | | | | | |
|---|---|--|------------------------------|-----------------------|---|---------------|
| | Regular meeting for experience sharing | Environment control activities excluding malaria | Pregnant mothers' conference | Traditional Ambulance | In Kind contribution to maternal Delivery | Total |
| 1 to 5 network | 387,000,000 | 243,000,000 | 146,000,000 | 62,400,000 | | 838,400,000 |
| 1 to 30 network | 230,000,000 | 178,000,000 | 133,000,000 | 111,000,000 | | 652,000,000 |
| Total | 617,000,000 | 421,000,000 | 279,000,000 | 173,400,000 | 75,400,000 | 1,565,800,000 |
| Per capita contribution (ETB) | 7.83 | 5.34 | 3.54 | 2.2 | 0.96 | 19.86 |
| Malaria control activities | | | | | | |
| | LLITN | IRS operation | Awareness creation | Pond drainage | | Total |
| 1 to 5 | 141,000,000 | 54,700,000 | 285,000,000 | 393,000,000 | | 873,700,000 |
| 1 to 30 | 115,000,000 | 53,700,000 | 123,000,000 | 139,000,000 | | 430,700,000 |
| Total | 256,000,000 | 108,400,000 | 408,000,000 | 532,000,000 | | 1,304,400,000 |
| Community contribution per capita | 3.25 | 1.38 | 5.18 | 6.75 | | 16.55 |
| Total community contribution for health development army and malaria control | | | | | | |
| Total community contribution | 873,000,000 | 529,400,000 | 687,000,000 | 705,400,000 | | 2,870,200,000 |
| Total community contribution per capita | 11.07 | 6.72 | 8.71 | 8.95 | 0.96 | 36.41 |

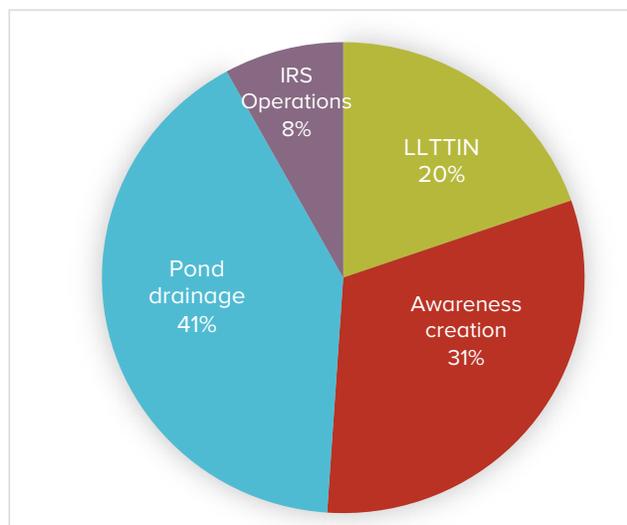
When the different activities of the HDA are explored, regular meetings among the members to share their experiences and best health practices account for about 40% of their contribution to the health system. This is followed by environmental management activities excluding malaria, with 27% of their contribution. Contribution to maternal delivery in the form of pregnant mother conferences and in-kind crop contribution accounted for about 23% of the total HDA estimated monetary contributions (see figure 6.1)

Figure 6.1 Share of Different Activities of the HDA



The analysis of the malaria control activities shows that pond drainage is the first area where community members spend their time, accounting for about 41% of the monetary value of community contribution. This is followed by awareness creation and distribution of LLITN with 31% and 20% respectively. IRS operation accounts for the least community contribution to malaria prevention, with 8% of the monetary value of community contribution (see figure 6.2).

Figure 6.2 Shares of Different Components of Community Malaria Control Activities



Chapter 7. Health Insurance Coverage

The third form of payment from households as a source of financing for the health system is in the form of paying for premiums and to be enrolled in insurance schemes. This section presents the survey findings on insurance coverage, reported benefit package coverage, and expenditures on insurance in Ethiopia.

7.1. Population Covered in Health Insurance

Of the total population of the country, based on the survey, it is estimated that about 7.4%¹³ of the population is covered by health insurance. The coverage of health insurance at the national level has increased significantly compared to the 1.25% coverage estimate in the last HH survey in 2010/11. This increase is due largely to the expansion of the Community Based Health Insurance (CBHI) scheme over the last five years¹⁴. In terms of residence, 95% of the population covered in insurance resides in rural areas and the remaining 5% resides in urban areas. This high coverage of health insurance in rural areas is mainly attributed to the implementation of CBHI targeting rural areas. Of the total insurance population in this survey, 51% are males and 49% are females. The total insured population projected as per this survey and its regional distribution is depicted in Table 7.1 below.

Table 7.1 Regional Distribution of Surveyed Population Covered by Health Insurance

| Region | Number of surveyed people covered in insurance | % of surveyed people covered by insurance |
|-------------------|--|---|
| Tigray | 1,117,373 | 19.19 |
| Afar | - | - |
| Amhara | 2,536,456 | 43.57 |
| Oromia | 819,878 | 14.08 |
| Somali | 14,560 | 0.25 |
| Benishangul Gumuz | 14,670 | 0.25 |
| SNNPR | 1,202,404 | 20.65 |
| Gambella | 511 | 0.01 |
| Harari | 2,338 | 0.04 |
| Addis Ababa | 109,907 | 1.89 |
| Dire Dawa | 3,681 | 0.06 |
| Total | 5,821,778 | 100 |

As presented in the above table, the four major regions (Tigray, Amhara, Oromia, and SNNP) constitute 97.5% of the population covered by insurance. This is again attributed to the implementation of CBHI targeting these four regions.

In terms of level of education of the insured population, about 56% don't have any type of formal education, while the remaining have varying levels of education ranging from adult to university education. Of those educated, about 75% have completed either primary education or adult/religious education. With regard to employment status, 92% of the insured household heads are currently employed, either in formal or informal sectors, while the remaining are either seeking work, retired, housewives or students.

¹³ This reported coverage might not reflect the true coverage rate, as routine data reports compiled from CBHI schemes show higher CBHI coverage than what is estimated in this survey.

¹⁴ The number of Woredas that implemented CBHI in the last financial year was 227. Only 12 woredas that implemented CBHI were included in the sample of 100 woredas in this survey.

The vast majority of insured household heads are farmers, which comprise 86% of insured households, followed by those employed in the private sector (4.8%) and civil servants (4.7%). Civil servants are generally covered through other forms of insurance, such as employer-provided and private individual insurance. The detailed distribution of the projected insured household heads that are currently working by occupation is shown in Table 7.2 below.

Table 7.2 Number and Percent of Households Covered in Insurance by Occupation

| Occupation | Number of HH enrolled in insurance | Head of HH enrolled in insurance by occupation (%) |
|----------------------------|------------------------------------|--|
| Farmer | 1,075,429 | 86 |
| Housewife | 736 | 0.06 |
| Shepherd | 1,248 | 0.01 |
| Civil Servant | 58,128 | 4.65 |
| Private Sector | 59,880 | 4.79 |
| Pastoralist | 0 | 0 |
| Agro-Pastoralist | 1,509 | 0.12 |
| Fishing | 0 | 0 |
| Retail and Wholesale trade | 30,360 | 2.43 |
| Not declared | 2,170 | 0.17 |
| Other (specify) | 18,309 | 1.46 |
| Don't know | 2,800 | 0.22 |
| Total | 1,250,569¹³ | 100 |

Understanding the health status of the covered population is important to estimate the effect of risk-pooling, as well as to measure changes in the covered population's health over time. Regarding the health status of the insured population at the time of this survey, about 87% of insured individuals rated their health condition either 'very good' or 'good'. This is slightly lower than the national average – 90% of the national sample rated their health as 'good' or 'very good'. CBHI membership is by household level instead of individual level, which includes both currently healthy household members, as well as ill household members. The majority of insured households (80.4%) enrolled all of their family members, while the remaining 19.6% of insured households didn't enroll all of their family members. The household level membership policy deters the effect of adverse selection (more sick people enrolling) and spreads the risk between the sick and healthy, sustaining the financial capacity of the insurance schemes.

In terms of distribution of CBHI coverage by economic status, the very poor (Q1) and very wealthy (Q5) households have smaller shares than expected of the total population insured, while Q2, Q3 and Q4 have either proportional or higher shares. The detailed distribution of household coverage by income quintile is shown in Table 7.3 below.

¹⁵ As per the projection of this survey, the number of households covered in insurance is 1,354,009 but in some Tables, this number varies due to missing data problem.

Table 7.3 Number and % of HHs Enrolled in Insurance by Wealth Quintile

| Expenditure quintile | Number of households enrolled in insurance | % of households enrolled in insurance |
|----------------------|--|---------------------------------------|
| Quintile 1 | 151,428 | 11.18 |
| Quintile 2 | 295,495 | 21.82 |
| Quintile 3 | 393,835 | 29.09 |
| Quintile 4 | 340,258 | 25.13 |
| Quintile 5 | 172,993 | 12.78 |
| Total | 1,354,009 | 100.00 |

The low share of the lowest quintile could be attributed to lack of income to pay the premium insurance. This low coverage of health insurance among the poorest people indicates the need to strengthen the fee waiver system and include the poor in the insurance schemes, particularly in CBHI, through government subsidy.

On the other hand, the reason for the low share of insurance coverage among the highest income population (Q5) could be due to absence of high-level benefit packages that could attract the wealthiest segment of the population, and private providers, which are used at a higher rate by the wealthy, not being covered under the CBHI program. As stated previously, CBHI is the dominant type of health insurance scheme available in Ethiopia at the time of the survey. However, it has a limited benefit package and is accepted only in government health facilities. This limitation might not attract the highest income bracket of the population. This implies the need to devise some mechanism, such as expanding the benefit packages to add tiers with corresponding higher premium, to attract this segment of the population to utilize CBHI. The types of currently available health insurance schemes and their estimated population coverage are presented in following Table.

Table 7.4 Number and % of individuals covered in insurance by type of Insurance

| Type of health insurance | Number of individuals covered | % of individuals covered |
|----------------------------------|-------------------------------|--------------------------|
| Community based health insurance | 5,474,801 | 96.35 |
| Private individual insurance | 21,164 | 0.37 |
| Employer | 172,893 | 3.04 |
| Others (specify) | 13,328 | 0.23 |
| Total | 5,682,186 | 100 |

7.2. Health Services Covered by Insurance

Apart from being a member of an insurance scheme, the extent of health service coverage under insurance schemes is a critical factor in terms of financial protection of individuals. In this regard, about 69% of insured households report being covered under insurance that entitles them to both inpatient and outpatient health services. This type of coverage reduces OOP payment and improves financial protection¹⁶. About 18% of insured households don't know the types of health services covered by their insurer, which indicates the need to strengthen communication efforts to increase awareness of benefit packages. Such awareness creation effort would enable members to make use of their entitlement, attract additional members, and improve the overall health insurance coverage in the country. The remaining insured

¹⁶ However, the comprehensiveness of the benefit packages included in outpatient and inpatient services also affect the extent of financial protection by an insurance scheme. This is reflected in the share of OOP to total health expenditure by the insured population. The following sub-section on health insurance expenditure sheds some light in this regard.

households, 10% report having only access to outpatient services, and 1.3% report having access only to inpatient services. The types of services reported by insured households to be covered under their insurance are presented in the following table.

Table 7.5 Number and Percent of Households Covered by Insurance by Type of Health Services Coverage Reported by Household Head

| Type of health insurance | Number of individuals covered | % of individuals covered |
|--------------------------|-------------------------------|--------------------------|
| In patient | 18,537 | 1.37 |
| Out patient | 139,786 | 10.32 |
| Both | 937,424 | 69.23 |
| Others (specify) | 10,645 | 0.79 |
| Don't Know | 247,617 | 18.29 |
| Total | 1,354,009 | 100 |

7.3. Health Insurance Expenditure

Members of health insurance schemes contribute premium payments to the insurance schemes for the health services for which they are entitled. According to this survey, the average household contribution for insurance per month is 38.50 ETB, and about 86.5% of the insured households contribute less than 50 ETB per month.

The main source of payment for insurance among the insured is the household head (91.6%) followed by employer (4.9%) and government (2.5%) for indigents¹⁷. As the level of poverty in Ethiopia is high¹⁸, the current coverage of the poor by government subsidy (only 2.5% of insured households), is low and needs to be improved to ensure access to health services by the poor. Details on the source of insurance premium payments are stated in the table below.

Table 7.6 Sources of Payment for Health Insurance

| Source of Payment for Insurance Premium | Number of households | Source of payment (%) |
|--|----------------------|-----------------------|
| Household head | 1,182,994 | 91.63 |
| Government (for Indigent HHS) | 31,863 | 2.47 |
| Employer | 63,576 | 4.92 |
| Self | 1,290 | 0.1 |
| Others (specify) | 6,433 | 0.5 |
| Household head & Government (for Indigent HHS) | 1,064 | 0.08 |
| Household head & Employer | 3,770 | 0.29 |
| Total | 1,290,990 | 100 |

As most members of the insurance schemes are farmers, 85% of the insured household's means of payment for insurance is cash. Only 3.6% of households contribute to their insurance from their salary. The remaining households means of payment for insurance includes family support and pension.

¹⁷ However, routine data reports from CBHI schemes indicate a higher proportion of indigents (about 10% of the insured population) are supported by government subsidy

¹⁸ It was projected that about 22.25% of the population of the country was below the poverty line in 2014/15 (Ministry of Finance and Economic Development, Nov. 2010, GTP (2010/11-2014/15)).

In addition to insurance contribution, some members of health insurance schemes also incurred OOP payment for health services that were not covered in their specific health insurance scheme. In this regard, of the total households enrolled in insurance and sought care, only 11.7% of households were required to pay OOP, while 80% did not make any additional OOP payment. The remaining 8% of insured households did not know or recall whether they were required to pay OOP or not. The low occurrence of OOP payments among the majority of insured households (80%) implies that these households were financially protected through their insurance and were not exposed to possible catastrophic health expenditure.

With regard to health expenditure among the insured, the total health expenditure among the insured population during the year was 723.3 million ETB. Of this, 620 million ETB (85.8%) was health insurance premium expenditure, while the remaining 102 million ETB (14.2%) was OOP payment for health services by members of health insurance schemes. This relatively low share of OOP payments compared to the total health expenditure of the insured population again confirms that OOP payment was not a barrier to accessing health services among the insured population. However, the share of health insurance expenditure to total national health expenditure was only 3%, which implies the need to increase coverage of health insurance through expanding the existing pre-payment schemes such as CBHI and introducing/expanding other schemes for formal sector employees and their families.

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Chapter 8. Annexes

ANNEX 1: CONSTRUCTION OF WEALTH INDEX

The wealth index constructed and used for the National Health Account Six Household Health Expenditure and Utilization Survey 2016 took steps needed to determine national wealth quintiles survey respondents fall into. In so doing, preparation, analysis of dataset, and interpreting the results took place step by step. Technically, these are preparation of variables for Principal Component Analysis (PCA), run the PCA analysis, assign wealth index scores to each respondent, and apply wealth quintile cut-off points.

Filmer and Pritchett (2001) introduced principal component analysis (PCA) as a way of creating wealth index in order to construct socio-economic indices. The index is created by aggregating large number of household assets, such as groups of productive assets (plough, livestock such as ox, cow, sheep, goat, horse, donkey and camel which are expressed in terms of Tropical Livestock Units, TLU), non-productive assets (radio, mobile and jewelry), household amenities (household owned their own houses, household houses' roof, wall and floor made of, better sources of cooking fuels, lighting, protected drinking water and type of facility does the household used) and land in order to obtain a univariate measure of household welfare. More weight was given to assets which vary most across households, so that an asset owned by all households is given zero weight and an asset owned by only a few household is given the highest weight.

In the construction of wealth index, using STATA 14 for analysis (Stata Corporation, College Station, TX, USA) applied principal factor component estimation, which is available in the STATA factor analysis procedure. In the implementation of this procedure, the main steps followed were:

1. Asset data were recorded as one if a household possesses a given asset or better asset, and zero otherwise. All variables recoded as 1/0 except TLUs and Land size, which were used in the PCA calculation in the form of continuous variables. The conversion factor for computing the TLUs: one cattle is equal to 0.7 TLUs, one sheep equal to 0.1 TLUs, one goat equal to 0.1 TLUs, one donkey equal to 0.5, one horse equal to 0.8, one chicken equal to 0.01 and one camel equal to 1.0 TLUs
2. Generate principal factor component based on data on values of indicators of possession of the different assets.
3. Compute a household wealth index score using the first factor component. In the computation of the index score, data pertaining to values of indicators of possession of each asset are multiplied by its own coefficient (also known as factor loading) on the factor component and summed to obtain the household's wealth index value.
4. Rank the wealth index scores from lowest to highest and generate household wealth quintiles. \
5. Then for each household, record quintile score, in a separate wealth quintile variable. This variable can be used for further analysis using wealth as a proxy for economic status. The Kaiser-Meyer-Olkin (KMO) test of sampling adequacy gave an overall KMO value of 88 percent suggesting that performing factor analysis is appropriate.

In general, based on in-built STATA command PCA along with the post estimation command provided the wealth index, quintiles and KMO measures of sampling adequacy

ANNEX 2: ESTIMATION OF THE TOTAL OOPS TO THE PROJECTED POPULATION

| | Survey Results using the sample data | Projections to 2016 estimated population | |
|-------------------------|--------------------------------------|--|--------------------|
| Populations projected | 78,833,595.00 | 92,206,005.00 | 1.169628316 |
| People who were ill | 7,530,186.00 | 8,807,518.77 | 1.169628316 |
| Outpatient consultation | 3,984,979.00 | 4,660,944.28 | 1.169628316 |
| inpatient admission | 636,556.00 | 744,533.92 | 1.169628316 |
| Outpatient total cost | 17,515,889,686 | 20,487,080,564.66 | 222.188138 |
| inpatient total cost | 797,520,005 | 932,801,980.79 | 10.11649925 |
| Total Cost | 18,313,409,691.00 | 21,419,882,545.45 | 232.3046373 |

ANNEX 3: ESTIMATION OF OOPS BY SERVICE PROVIDERS

| | Outpatient | | | Inpatient | | |
|--------------------------------|------------------------|-------------|-------------------------|------------------------|-------------|-------------------------|
| | Population 78,833,595* | | Population 92,206,005** | Population 78,833,595* | | Population 92,206,005** |
| Govt. Hospital | 6,280,000,000 | 36% | 7,345,265,827 | 455,000,000 | 64% | 532,180,883.99 |
| Private hospital | 2,570,000,000 | 15% | 3,005,944,773 | 139,000,000 | 20% | 162,578,335.99 |
| Not for profit hospital | 78,900,000 | 0% | 92,283,674 | 7,361,125 | 1% | 8,609,780.24 |
| Govt. Health Centre | 2,430,000,000 | 14% | 2,842,196,809 | 26,500,000 | 4% | 30,995,150.39 |
| Govt. health post | 129,000,000 | 1% | 150,882,053 | | 0% | - |
| Not for profit health center | 113,000,000 | 1% | 132,168,000 | 1,581,349 | 0% | 1,849,590.57 |
| Private Clinic | 5,500,000,000 | 31% | 6,432,955,741 | 80,300,000 | 11% | 93,921,153.81 |
| NGO Clinic | 2,989,686 | 0% | 3,496,821 | | 0% | - |
| Company/parastatal clinic | - | 0% | - | | 0% | - |
| Pharmacy/ Drugstore | 143,000,000 | 1% | 167,256,849 | | 0% | - |
| Traditional healer / religious | 234,000,000 | 1% | 273,693,026 | | 0% | - |
| TBA | - | 0% | - | | 0% | - |
| Other (specify) | 35,000,000 | 0% | 40,936,991 | 2,948,091 | 0% | 3,448,170.71 |
| Total | 17,515,889,686 | 100% | 20,487,080,565 | 712,690,565 | 100% | 833,583,065.69 |

* Sample projected 78,833,595

** 2016 population estimate 92,206,005

ANNEX 4: CAUSES OF OUTPATIENT VISITS TO A HEALTH FACILITY

| Illness and services | % |
|--|---------------|
| Nutritional supplements | 21.7% |
| Intestinal worms | 11.8% |
| Malaria | 11.1% |
| Diseases of Respiratory including pneumonia | 9.3% |
| Diarrhea | 8.7% |
| Kidney failure | 3.5% |
| Diabetics | 3.2% |
| Micronutrient powder | 3.1% |
| Other infectious and parasitic diseases | 2.9% |
| Physical check-up (prevention) | 2.9% |
| Mental disorders | 2.5% |
| Delivery | 2.2% |
| HIV/AIDS | 2.1% |
| Injuries and other conditions | 2.1% |
| Neglected tropical diseases | 1.9% |
| Immunizations (prevention) | 1.9% |
| TB | 1.6% |
| Injectable | 1.1% |
| Cancer | 0.9% |
| Oral contraceptives | 0.9% |
| Vaccine preventable diseases | 0.8% |
| Norplant | 0.8% |
| Nutritional deficiencies (severe malnutrition) | 0.7% |
| Prenatal/antenatal care | 0.7% |
| Dental | 0.5% |
| Intrauterine device | 0.4% |
| Sterilization | 0.3% |
| Condoms | 0.2% |
| Vitamins/minerals | 0.2% |
| VCT | 0.1% |
| Total | 100.0% |

ANNEX 5: REASONS FOR INPATIENT ADMISSIONS

| Reasons | % |
|--|---------------|
| Diarrhea and intestinal worms | 11.2% |
| Diseases of Respiratory including pneumonia | 8.7% |
| Malaria | 6.1% |
| Diabetics | 5.5% |
| Delivery | 4.3% |
| TB | 4.0% |
| Mental disorders | 3.8% |
| Other infectious and parasitic diseases | 3.5% |
| Caesarean | 3.4% |
| Kidney failure | 3.2% |
| Vaccine preventable diseases | 2.9% |
| Injuries and other conditions | 2.7% |
| HIV/AIDS | 2.1% |
| Neglected tropical diseases | 2.1% |
| Nutritional deficiencies (severe malnutrition) | 1.8% |
| Cancer | 1.4% |
| Vaginal delivery | 1.4% |
| Community management of Acute malnutrition | 1.3% |
| Treatment/surgery for reproductive health related cancers etc. | 0.7% |
| Sterilization | 0.2% |
| Other Services | 29.6% |
| Total | 100.0% |

ANNEX 6: ESTIMATION OF OUT OF POCKET PAYMENTS (OOP) BY SERVICES

| | Outpatient | | | Inpatient Services | | | Total OOP in ETB | |
|---|------------------|------------|-------------------------------|--------------------|------------|-------------------------------|-------------------------------|--------------------------------|
| | Total OOP in ETB | Share in % | Projected to 2016 population* | Total OOP in ETB | Share in % | Projected to 2016 population* | Total OOP in ETB for Sample** | Projected to 2016 population** |
| Not specified | 5,460,000,000 | 31% | 6,386,170,608 | | | | 5,460,000,000 | 6,386,170,608 |
| Intestinal worms | 2,060,000,000 | 12% | 2,409,434,332 | 42,900,000 | 5% | 50,177,055 | 2,102,900,000 | 2,459,611,387 |
| Kidney failure | 1,720,000,000 | 10% | 2,011,760,704 | 40,000,000 | 5% | 46,785,133 | 1,760,000,000 | 2,058,545,837 |
| Diseases of Respiratory including pneumonia | 1,360,000,000 | 8% | 1,590,694,510 | 44,400,000 | 6% | 51,931,497 | 1,404,400,000 | 1,642,626,008 |
| Malaria | 1,290,000,000 | 7% | 1,508,820,528 | 22,800,000 | 3% | 26,667,526 | 1,312,800,000 | 1,535,488,054 |
| Disorders | 1,050,000,000 | 6% | 1,228,109,732 | 45,100,000 | 6% | 52,750,237 | 1,095,100,000 | 1,280,859,969 |
| Cancer | 926,000,000 | 5% | 1,083,075,821 | 37,400,000 | 5% | 43,744,099 | 963,400,000 | 1,126,819,920 |
| Diarrhea | 798,000,000 | 5% | 933,363,397 | 10,600,000 | 1% | 12,398,060 | 808,600,000 | 945,761,457 |
| TB | 519,000,000 | 3% | 607,037,096 | 34,300,000 | 4% | 40,118,251 | 553,300,000 | 647,155,347 |
| Injuries and other conditions | 418,000,000 | 2% | 488,904,636 | 38,900,000 | 5% | 45,498,542 | 456,900,000 | 534,403,178 |
| Physical check-up (prevention) | 406,000,000 | 2% | 474,869,096 | 22,300,000 | 3% | 26,082,711 | 428,300,000 | 500,951,808 |
| Diabetics | 278,000,000 | 2% | 325,156,672 | 14,300,000 | 2% | 16,725,685 | 292,300,000 | 341,882,357 |
| Other infectious and parasitic diseases | 232,000,000 | 1% | 271,353,769 | 36,600,000 | 5% | 42,808,396 | 268,600,000 | 314,162,166 |
| Neglected tropical diseases | 173,000,000 | 1% | 202,345,699 | 6,159,130 | 1% | 7,203,893 | 179,159,130 | 209,549,592 |
| Oral contraceptives | 118,000,000 | 1% | 138,016,141 | 5,015,864 | 1% | 5,866,697 | 123,015,864 | 143,882,838 |
| Dental | 117,000,000 | 1% | 136,846,513 | | 0% | - | 117,000,000 | 136,846,513 |
| Prenatal/antenatal care | 96,700,000 | 1% | 113,103,058 | | 0% | - | 96,700,000 | 113,103,058 |
| Nutritional deficiencies (severe malnutrition) | 96,200,000 | 1% | 112,518,244 | 4,373,267 | 1% | 5,115,097 | 100,573,267 | 117,633,341 |
| Immunizations (prevention) | 46,100,000 | 0% | 53,919,865 | 7,241,035 | 1% | 8,469,320 | 53,341,035 | 62,389,185 |

| | Outpatient | | | Inpatient Services | | | Total OOP in ETB | |
|------------------------------|-----------------------|-------------|------------------------------|--------------------|-------------|------------------------------|-----------------------------|------------------------------|
| | Total OOP in ETB | Share in % | Projected to 2016 population | Total OOP in ETB | Share in % | Projected to 2016 population | Total OOP in ETB for Sample | Projected to 2016 population |
| Physiotherapy | 42,800,000 | 0% | 50,060,092 | | 0% | - | 42,800,000 | 50,060,092 |
| HIV/AIDS | 42,000,000 | 0% | 49,124,389 | | 0% | - | 42,000,000 | 49,124,389 |
| Delivery | 23,000,000 | 0% | 26,901,451 | | 0% | - | 23,000,000 | 26,901,451 |
| Vaccine preventable diseases | 19,500,000 | 0% | 22,807,752 | 1,206,804 | 0% | 1,411,512 | 20,706,804 | 24,219,264 |
| Norplant | 15,800,000 | 0% | 18,480,127 | 361,000,000 | 46% | 422,235,822 | 376,800,000 | 440,715,950 |
| Vitamins/minerals | 13,700,000 | 0% | 16,023,908 | | 0% | - | 13,700,000 | 16,023,908 |
| Injectable | 12,500,000 | 0% | 14,620,354 | 5,313,977 | 1% | 6,215,378 | 17,813,977 | 20,835,732 |
| Intrauterine device | 6,337,319 | 0% | 7,412,308 | 7,001,200 | 1% | 8,188,802 | 13,338,519 | 15,601,110 |
| Sterilization | 4,977,297 | 0% | 5,821,588 | | 0% | - | 4,977,297 | 5,821,588 |
| Micronutrient powder | 2,582,845 | 0% | 3,020,969 | | 0% | - | 2,582,845 | 3,020,969 |
| Condoms | 1,014,547 | 0% | 1,186,643 | 2,666,421 | 0% | 3,118,722 | 3,680,968 | 4,305,364 |
| Circumcision | 308,730 | 0% | 361,099 | | 0% | - | 308,730 | 361,099 |
| Total | 17,348,520,738 | 100% | 20,291,321,104 | 789,577,698 | 100% | 923,512,434 | 18,138,098,436 | 21,214,833,537 |

** Sample projected 78,833,595

* 2016 population estimate 92,206,005

ANNEX 7: LIST OF ENUMERATION AREAS BY REGIONS AND WOREDAS

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|--------|-------------------|-----------------|-------------------|---------|-------------------|-------------------------------|--------------|
| 1 | TIGRAY | NORTH WEST TIGRAY | TAHTAY ADIYABO | DAGUALA | Rural | 188 | 176 | 1305.1 |
| 2 | TIGRAY | NORTH WEST TIGRAY | TAHTAY ADIYABO | ADITETER | Rural | 214 | 145 | 944.6 |
| 3 | TIGRAY | NORTH WEST TIGRAY | TAHTAY ADIYABO | ZABANGEDENA | Rural | 203 | 316 | 2170.2 |
| 4 | TIGRAY | NORTH WEST TIGRAY | TSELEMTI | MAY TEHILIT | Rural | 220 | 253 | 1059.2 |
| 5 | TIGRAY | NORTH WEST TIGRAY | TSELEMTI | MAY AYENE | Rural | 194 | 326 | 1547.8 |
| 6 | TIGRAY | NORTH WEST TIGRAY | TSELEMTI | SEKOTA SILASSE | Rural | 218 | 221 | 933.7 |
| 7 | TIGRAY | NORTH WEST TIGRAY | TSELEMTI | MECHARA | Rural | 173 | 260 | 1384.3 |
| 8 | TIGRAY | NORTH WEST TIGRAY | TSELEMTI | CHACHORE | Rural | 167 | 158 | 871.4 |
| 9 | TIGRAY | CENTRAL TIGRAY | ADWA | KEREN | Rural | 179 | 215 | 1539.9 |
| 10 | TIGRAY | CENTRAL TIGRAY | ADWA | WEYENITI | Rural | 169 | 214 | 1623.4 |
| 11 | TIGRAY | CENTRAL TIGRAY | ADWA | MAY TUOM | Rural | 146 | 160 | 1405.0 |
| 12 | TIGRAY | CENTRAL TIGRAY | ADWA | TAHTAY YILOGOMITI | Rural | 190 | 231 | 1558.7 |
| 13 | TIGRAY | CENTRAL TIGRAY | DEGUA TEMBEN | AREBAYI | Rural | 213 | 220 | 1156.7 |
| 14 | TIGRAY | CENTRAL TIGRAY | DEGUA TEMBEN | MIZANE BIRIHAN | Rural | 166 | 192 | 1295.3 |
| 15 | TIGRAY | CENTRAL TIGRAY | DEGUA TEMBEN | MIZAN | Rural | 199 | 205 | 1153.6 |
| 16 | TIGRAY | EASTERN TIGRAY | HAWUZEN | D/ABAY | Rural | 186 | 205 | 1248.1 |
| 17 | TIGRAY | EASTERN TIGRAY | HAWUZEN | MOZITEY | Rural | 200 | 220 | 1245.7 |
| 18 | TIGRAY | EASTERN TIGRAY | HAWUZEN | D/HIWET | Rural | 171 | 197 | 1304.6 |
| 19 | TIGRAY | EASTERN TIGRAY | HAWUZEN | FIREWYINI | Rural | 244 | 333 | 1545.5 |
| 20 | TIGRAY | EASTERN TIGRAY | ADIGRAT/TOWN/ | KEBELE 01 | Town | 194 | 158 | 862.9 |
| 21 | TIGRAY | EASTERN TIGRAY | ADIGRAT/TOWN/ | KEBELE 02 | Town | 250 | 160 | 678.1 |
| 22 | TIGRAY | EASTERN TIGRAY | ADIGRAT/TOWN/ | KEBELE 03 | Town | 142 | 94 | 701.4 |
| 23 | TIGRAY | SOUTHERN TIGRAY | HINTALO WAJIRAT | DEJEN | Rural | 174 | 207 | 993.4 |
| 24 | TIGRAY | SOUTHERN TIGRAY | HINTALO WAJIRAT | HAREKO | Rural | 207 | 248 | 1000.4 |
| 25 | TIGRAY | SOUTHERN TIGRAY | HINTALO WAJIRAT | GONIKA | Rural | 189 | 201 | 888.1 |
| 26 | TIGRAY | SOUTHERN TIGRAY | HINTALO WAJIRAT | WAZA ADI AWANA | Rural | 173 | 222 | 1071.6 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|--------|-----------------|------------------------|--------------------------|---------|-------------------|-------------------------------|--------------|
| 27 | TIGRAY | SOUTHERN TIGRAY | HINTALO WAJIRAT | ADI KEYIH | Rural | 153 | 167 | 911.4 |
| 28 | TIGRAY | SOUTHERN TIGRAY | ALAMATA | LAELAY DAYO | Rural | 251 | 153 | 820.4 |
| 29 | TIGRAY | SOUTHERN TIGRAY | ALAMATA | SELAM BEQALESI | Rural | 212 | 183 | 1161.8 |
| 30 | TIGRAY | SOUTHERN TIGRAY | ALAMATA | TEMUGA | Rural | 166 | 186 | 1508.0 |
| 31 | TIGRAY | MEKELE TOWN | SEMEN MEKELE/ TOWN/ | AEYDER | Town | 149 | 260 | 1848.8 |
| 32 | TIGRAY | MEKELE TOWN | SEMEN MEKELE/ TOWN/ | AEYDER | Town | 179 | 195 | 1154.2 |
| 33 | TIGRAY | MEKELE TOWN | SEMEN MEKELE/ TOWN/ | KEDAMY WEYANE | Town | 174 | 156 | 949.9 |
| 34 | TIGRAY | MEKELE TOWN | SEMEN MEKELE/ TOWN/ | HEWULTI | Town | 195 | 103 | 559.6 |
| 35 | TIGRAY | MEKELE TOWN | SEMEN MEKELE/ TOWN/ | SEWI NIGUS | Town | 184 | 137 | 788.9 |
| 36 | TIGRAY | MEKELE TOWN | SEMEN MEKELE/ TOWN/ | INDUSTRY | Town | 225 | 302 | 1422.1 |
| 37 | AFAR | ZONE 1 | ELIDAR | MANDANA MUSALI | Rural | 421 | 74 | 76.2 |
| 38 | AFAR | ZONE 1 | ELIDAR | GEWAHINAGEBELTILE- HI | Rural | 282 | 47 | 72.2 |
| 39 | AFAR | ZONE 1 | ELIDAR | DOBI PARADIZO | Rural | 150 | 82 | 236.9 |
| 40 | AFAR | ZONE 1 | ELIDAR | AKULE | Rural | 111 | 184 | 718.2 |
| 41 | AFAR | ZONE 1 | ASAYITA | KEBELE 01 | Town | 299 | 225 | 331.0 |
| 42 | AFAR | ZONE 1 | ASAYITA | KEBELE 01 | Town | 177 | 110 | 273.3 |
| 43 | AFAR | ZONE 1 | ASAYITA | KEBELE 02 | Town | 185 | 251 | 667.7 |
| 44 | AFAR | ZONE 1 | ASAYITA | KEBELE 02 | Town | 214 | 209 | 480.6 |
| 45 | AFAR | ZONE 2 | ERABTI | LE'AD | Rural | 192 | 110 | 279.2 |
| 46 | AFAR | ZONE 2 | ERABTI | DALEGOSO | Rural | 178 | 126 | 345.0 |
| 47 | AFAR | ZONE 2 | ERABTI | ADU | Rural | 187 | 280 | 729.7 |
| 48 | AFAR | ZONE 2 | ERABTI | ALBO | Rural | 201 | 201 | 487.3 |
| 49 | AFAR | ZONE 3 | AMIBARA | GELSA | Rural | 471 | 90 | 94.8 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|--------|--------------|--------------|----------------------------|---------|-------------------|-------------------------------|--------------|
| 50 | AFAR | ZONE 3 | AMIBARA | BURI | Rural | 329 | 167 | 251.7 |
| 51 | AFAR | ZONE 3 | AMIBARA | BONTA | Rural | 309 | 154 | 247.1 |
| 52 | AFAR | ZONE 3 | AMIBARA | BEDUL ALE | Rural | 111 | 189 | 844.3 |
| 53 | AFAR | ZONE 4 | YALO | WELEA | Rural | 121 | 111 | 416.2 |
| 54 | AFAR | ZONE 5 | YALO | GIDAELEANA MUDALE- LINA | Rural | 283 | 125 | 200.4 |
| 55 | AFAR | ZONE 6 | YALO | UDEYLE | Rural | 789 | 193 | 111.0 |
| 56 | AFAR | ZONE 7 | YALO | REKREK | Rural | 221 | 70 | 143.7 |
| 57 | AFAR | ZONE 8 | YALO | MESGID | Rural | 217 | 123 | 257.2 |
| 58 | AMHARA | NORTH GONDAR | DABAT | AYEREFEDA | Rural | 226 | 237 | 2509.1 |
| 59 | AMHARA | NORTH GONDAR | DABAT | AREBUR | Rural | 166 | 175 | 2522.4 |
| 60 | AMHARA | NORTH GONDAR | DABAT | KAREHA | Rural | 184 | 191 | 2483.7 |
| 61 | AMHARA | NORTH GONDAR | DABAT | DOROMAMAYE | Rural | 228 | 217 | 2277.2 |
| 62 | AMHARA | NORTH GONDAR | CHILGA | DANGURA | Rural | 154 | 169 | 1720.5 |
| 63 | AMHARA | NORTH GONDAR | CHILGA | MINIBAKS DENGORSA | Rural | 223 | 213 | 1497.5 |
| 64 | AMHARA | NORTH GONDAR | CHILGA | ADIS ALEM | Rural | 182 | 192 | 1654.0 |
| 65 | AMHARA | NORTH GONDAR | CHILGA | DL AMBA | Rural | 206 | 198 | 1506.9 |
| 66 | AMHARA | NORTH GONDAR | CHILGA | DENGEL WENBELSEG | Rural | 216 | 206 | 1495.2 |
| 67 | AMHARA | NORTH GONDAR | CHILGA | KWAKGEMBELWA | Rural | 209 | 185 | 1387.8 |
| 68 | AMHARA | NORTH GONDAR | GONDER/TOWN/ | DIB ABO DEFECHA | Town | 240 | 221 | 382.5 |
| 69 | AMHARA | NORTH GONDAR | GONDER/TOWN/ | GEBIREAL | Town | 215 | 226 | 436.7 |
| 70 | AMHARA | NORTH GONDAR | GONDER/TOWN/ | LIDETA | Town | 230 | 216 | 390.1 |
| 71 | AMHARA | NORTH GONDAR | GONDER/TOWN/ | MEHAL ARADA | Town | 138 | 162 | 487.7 |
| 72 | AMHARA | NORTH GONDAR | GONDER/TOWN/ | AZEZO T/HAYIMANOT | Town | 203 | 352 | 720.3 |
| 73 | AMHARA | NORTH GONDAR | GONDER/TOWN/ | MARAKI | Town | 243 | 233 | 398.3 |
| 74 | AMHARA | NORTH GONDAR | GONDER/TOWN/ | AZEZO AYER MAREFIYA | Town | 190 | 275 | 601.3 |
| 75 | AMHARA | SOUTH GONDAR | EBINAT | ADER SEG ABINA | Rural | 178 | 179 | 1347.6 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|--------|--------------|----------|----------------------|---------|-------------------|-------------------------------|--------------|
| 76 | AMHARA | SOUTH GONDAR | EBINAT | DEBER TEKLEHAY-MANOT | Rural | 176 | 183 | 1393.4 |
| 77 | AMHARA | SOUTH GONDAR | EBINAT | ABEGELDI LUSINA | Rural | 204 | 207 | 1359.8 |
| 78 | AMHARA | SOUTH GONDAR | EBINAT | ZHIHA | Rural | 249 | 211 | 1135.6 |
| 79 | AMHARA | SOUTH GONDAR | EBINAT | SALAMAYA LANKO | Rural | 223 | 231 | 1388.2 |
| 80 | AMHARA | SOUTH GONDAR | EBINAT | GEDAYE | Rural | 202 | 212 | 1406.4 |
| 81 | AMHARA | SOUTH GONDAR | SIMADA | KEBELE 19 | Rural | 144 | 173 | 1491.7 |
| 82 | AMHARA | SOUTH GONDAR | SIMADA | KEBELE 24 | Rural | 171 | 183 | 1328.8 |
| 83 | AMHARA | SOUTH GONDAR | SIMADA | KEBELE 17 | Rural | 184 | 172 | 1160.6 |
| 84 | AMHARA | SOUTH GONDAR | SIMADA | KEBELE 28 | Rural | 154 | 165 | 1330.3 |
| 85 | AMHARA | SOUTH GONDAR | SIMADA | KEBELE 02 | Rural | 151 | 197 | 1619.9 |
| 86 | AMHARA | SOUTH GONDAR | SIMADA | KEBELE 29 | Rural | 136 | 159 | 1451.6 |
| 87 | AMHARA | SOUTH GONDAR | SIMADA | KEBELE 35 | Rural | 126 | 297 | 2926.7 |
| 88 | AMHARA | NORTH WELLO | GIDAN | TATA | Rural | 166 | 192 | 2093.3 |
| 89 | AMHARA | NORTH WELLO | GIDAN | MEWAT | Rural | 191 | 233 | 2207.8 |
| 90 | AMHARA | NORTH WELLO | GIDAN | TUBBA | Rural | 197 | 228 | 2094.6 |
| 91 | AMHARA | NORTH WELLO | GIDAN | BEQULO MANEQIYA | Rural | 208 | 312 | 2714.7 |
| 92 | AMHARA | NORTH WELLO | GIDAN | AGEWUYE | Rural | 161 | 177 | 1989.6 |
| 93 | AMHARA | NORTH WELLO | LASTA | BILIBALA | Rural | 200 | 215 | 2779.1 |
| 94 | AMHARA | NORTH WELLO | LASTA | INJAFAT | Rural | 454 | 248 | 1412.2 |
| 95 | AMHARA | NORTH WELLO | LASTA | DEGOSACH | Rural | 179 | 176 | 2541.9 |
| 96 | AMHARA | NORTH WELLO | LASTA | GENET MARIYAM | Rural | 196 | 234 | 3086.4 |
| 97 | AMHARA | SOUTH WELLO | ALBUKO | FELANA MEDA | Rural | 174 | 165 | 3679.3 |
| 98 | AMHARA | SOUTH WELLO | ALBUKO | QALO | Rural | 198 | 185 | 3625.3 |
| 99 | AMHARA | SOUTH WELLO | WERE ILU | BATEL | Rural | 181 | 171 | 2753.9 |
| 100 | AMHARA | SOUTH WELLO | WERE ILU | DOLU | Rural | 173 | 191 | 3218.3 |
| 101 | AMHARA | SOUTH WELLO | WERE ILU | GESHOBER | Rural | 212 | 228 | 3135.0 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|--------|-------------|---------------------|---------------------------|---------|-------------------|-------------------------------|--------------|
| 102 | AMHARA | SOUTH WELLO | KOMBOLCHA/ TOWN/ | KEBELE 03 | Town | 326 | 156 | 644.0 |
| 103 | AMHARA | SOUTH WELLO | KOMBOLCHA/ TOWN/ | KEBELE 08 | Town | 209 | 164 | 1056.1 |
| 104 | AMHARA | SOUTH WELLO | KOMBOLCHA/ TOWN/ | KEBELE 12 | Town | 262 | 196 | 1006.8 |
| 105 | AMHARA | NORTH SHEWA | EFRATANA GIDIM | MIRAMIR SELELO | Rural | 228 | 210 | 2713.6 |
| 106 | AMHARA | NORTH SHEWA | EFRATANA GIDIM | LAGNAWATAYENA TACHIN | Rural | 108 | 151 | 4119.2 |
| 107 | AMHARA | NORTH SHEWA | EFRATANA GIDIM | ASHIQUAYE SHERIF | Rural | 207 | 249 | 3544.0 |
| 108 | AMHARA | EAST GOJAM | BIBUGN | MOSEBA SHIME ABO | Rural | 136 | 206 | 5886.8 |
| 109 | AMHARA | EAST GOJAM | BIBUGN | BIBUNYI GENETE MARIA | Rural | 214 | 197 | 3577.7 |
| 110 | AMHARA | EAST GOJAM | BIBUGN | WENBER KIDUS YO- HANES | Rural | 198 | 208 | 4082.7 |
| 111 | AMHARA | EAST GOJAM | DEBRE ELIAS | GIBITSAWITI | Rural | 196 | 200 | 3939.3 |
| 112 | AMHARA | EAST GOJAM | DEBRE ELIAS | DEJIBA | Rural | 187 | 180 | 3716.0 |
| 113 | AMHARA | EAST GOJAM | DEBERE MARKOS | KEBELE 03 | Town | 224 | 375 | 1926.1 |
| 114 | AMHARA | EAST GOJAM | DEBERE MARKOS | KEBELE 05 | Town | 166 | 527 | 3652.5 |
| 115 | AMHARA | WEST GOJAM | SEMEN ACHEFER | ESETUMITE | Rural | 327 | 216 | 1179.1 |
| 116 | AMHARA | WEST GOJAM | SEMEN ACHEFER | BIZIRA TUGIE | Rural | 161 | 173 | 1918.0 |
| 117 | AMHARA | WEST GOJAM | SEMEN ACHEFER | CHINBA | Rural | 198 | 156 | 1406.4 |
| 118 | AMHARA | WEST GOJAM | SEMEN ACHEFER | BELEN SANKURAWECH | Rural | 463 | 191 | 736.4 |
| 119 | AMHARA | WEST GOJAM | SEMEN ACHEFER | ANIBESHAN JOHANA | Rural | 215 | 280 | 2324.6 |
| 120 | AMHARA | WEST GOJAM | DEGA DAMOT | LIJE NIGUS CHAT WARK | Rural | 181 | 182 | 2029.5 |
| 121 | AMHARA | WEST GOJAM | DEGA DAMOT | SANTIME YESHOH | Rural | 279 | 222 | 1606.0 |
| 122 | AMHARA | WEST GOJAM | DEGA DAMOT | DAMOT TSEYION | Rural | 219 | 179 | 1649.7 |
| 123 | AMHARA | WEST GOJAM | DEGA DAMOT | AGEMI NIJAR | Rural | 179 | 221 | 2492.0 |
| 124 | AMHARA | WAG HIMRA | DEHANA | TSAMELA | Rural | 195 | 198 | 2553.5 |
| 125 | AMHARA | WAG HIMRA | DEHANA | DABETO | Rural | 214 | 194 | 2279.8 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|---------|--------------|-----------------|-------------------------|---------|-------------------|-------------------------------|--------------|
| 126 | AMHARA | WAG HIMRA | DEHANA | DIDA | Rural | 185 | 276 | 3751.9 |
| 127 | AMHARA | WAG HIMRA | DEHANA | AZILA | Rural | 204 | 199 | 2453.2 |
| 128 | AMHARA | AWI | GUAGUSA SHIKUDA | ASHEFA DAREWA BAHIRE | Rural | 190 | 148 | 3081.5 |
| 129 | AMHARA | AWI | GUAGUSA SHIKUDA | ABSELA WARDA | Rural | 224 | 208 | 3673.4 |
| 130 | OROMIYA | WEST WELLEGA | GIMBI | MELELO GACHI | Rural | 233 | 239 | 4100.7 |
| 131 | OROMIYA | WEST WELLEGA | GIMBI | MARICHE MIKAEL | Rural | 196 | 182 | 3712.2 |
| 132 | OROMIYA | EAST WELLEGA | BONEYA BUSHE | JAWIS | Rural | 185 | 197 | 6988.6 |
| 133 | OROMIYA | EAST WELLEGA | BONEYA BUSHE | CHEFE KONICHI | Rural | 183 | 175 | 6276.0 |
| 134 | OROMIYA | EAST WELLEGA | NEKEMTE TOWN | KESO | Town | 204 | 171 | 910.6 |
| 135 | OROMIYA | EAST WELLEGA | NEKEMTE TOWN | BKAKISA QELE | Town | 157 | 165 | 1141.7 |
| 136 | OROMIYA | EAST WELLEGA | NEKEMTE TOWN | BURKA JATO | Town | 135 | 105 | 844.9 |
| 137 | OROMIYA | EAST WELLEGA | NEKEMTE TOWN | DARGE | Town | 206 | 199 | 1049.4 |
| 138 | OROMIYA | ILU ABA BORA | GECHI | MUCHA | Rural | 171 | 167 | 4513.5 |
| 139 | OROMIYA | ILU ABA BORA | GECHI | ASENIDABO | Rural | 258 | 213 | 3815.5 |
| 140 | OROMIYA | JIMMA | SOKORU | KULATA | Rural | 210 | 212 | 2349.2 |
| 141 | OROMIYA | JIMMA | SOKORU | ERETO BEKE | Rural | 178 | 211 | 2758.5 |
| 142 | OROMIYA | JIMMA | SOKORU | GENGELETA | Rural | 168 | 241 | 3338.2 |
| 143 | OROMIYA | JIMMA | SOKORU | LIBEN | Rural | 206 | 265 | 2993.5 |
| 144 | OROMIYA | JIMMA | DEDO | OFOLE DAWE | Rural | 179 | 203 | 1208.8 |
| 145 | OROMIYA | JIMMA | DEDO | BUSA ESE ALEN | Rural | 210 | 229 | 1162.3 |
| 146 | OROMIYA | JIMMA | DEDO | BITO | Rural | 196 | 190 | 1033.2 |
| 147 | OROMIYA | JIMMA | DEDO | GESHE | Rural | 171 | 162 | 1009.8 |
| 148 | OROMIYA | JIMMA | DEDO | GARIRU KEDIDA | Rural | 213 | 213 | 1065.9 |
| 149 | OROMIYA | JIMMA | DEDO | ASA NUPE | Rural | 161 | 168 | 1112.2 |
| 150 | OROMIYA | JIMMA | DEDO | KAJA DLIBI | Rural | 143 | 206 | 1535.5 |
| 151 | OROMIYA | JIMMA | DEDO | METISO | Rural | 170 | 206 | 1291.6 |
| 152 | OROMIYA | JIMMA | DEDO | ASIKIRA | Rural | 162 | 211 | 1388.3 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|---------|-------------|-------------------------|---------------------------|---------|-------------------|-------------------------------|--------------|
| 153 | OROMIYA | WEST SHEWA | AMBO | GENJINA GORO HORE | Rural | 178 | 199 | 3064.3 |
| 154 | OROMIYA | WEST SHEWA | AMBO | SENQELE FARSI | Rural | 356 | 155 | 1193.4 |
| 155 | OROMIYA | WEST SHEWA | AMBO | GOSU QORA | Rural | 209 | 251 | 3291.8 |
| 156 | OROMIYA | WEST SHEWA | ABUNA GINDEBE- RET | DEGOMA KIBI | Rural | 170 | 208 | 3612.3 |
| 157 | OROMIYA | WEST SHEWA | ABUNA GINDEBE- RET | WELENSU | Rural | 180 | 237 | 3887.3 |
| 158 | OROMIYA | WEST SHEWA | ABUNA GINDEBE- RET | OBORA | Rural | 163 | 177 | 3206.0 |
| 159 | OROMIYA | WEST SHEWA | ABUNA GINDEBE- RET | DEGA TINA | Rural | 189 | 236 | 3686.6 |
| 160 | OROMIYA | NORTH SHEWA | KIMBIBIT | WENTU | Rural | 205 | 198 | 4499.0 |
| 161 | OROMIYA | NORTH SHEWA | KIMBIBIT | TABOTANA MEHA- MEDE | Rural | 222 | 224 | 4700.0 |
| 162 | OROMIYA | NORTH SHEWA | KIMBIBIT | MENUSHANA LAYKOM- BOLC | Rural | 234 | 226 | 4498.8 |
| 163 | OROMIYA | EAST SHEWA | ADAMI TULU JIDO KOMB | ABUNE GERMAMA | Rural | 131 | 199 | 3826.8 |
| 164 | OROMIYA | EAST SHEWA | ADAMI TULU JIDO KOMB | KORME BUJURE | Rural | 177 | 214 | 3045.8 |
| 165 | OROMIYA | EAST SHEWA | ADAMI TULU JIDO KOMB | BARA HOBICHO | Rural | 184 | 215 | 2943.6 |
| 166 | OROMIYA | ARSI | CHOLE | MOYE GARADIMA | Rural | 202 | 185 | 3397.2 |
| 167 | OROMIYA | ARSI | CHOLE | GEMIBO DHAWE | Rural | 174 | 203 | 4327.6 |
| 168 | OROMIYA | ARSI | CHOLE | MAGNA WERQE DE- RARTU | Rural | 274 | 162 | 2193.1 |
| 169 | OROMIYA | ARSI | LODE HETOSA | GONIDE KORICHASA | Rural | 187 | 191 | 3395.0 |
| 170 | OROMIYA | ARSI | LODE HETOSA | SHAYA | Rural | 166 | 125 | 2502.9 |
| 171 | OROMIYA | ARSI | LODE HETOSA | GEBE | Rural | 153 | 160 | 3476.0 |
| 172 | OROMIYA | ARSI | ASELA | BOLE | Town | 191 | 296 | 1674.9 |
| 173 | OROMIYA | ARSI | ASELA | Welkesa | Town | 261 | 241 | 997.9 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|---------|--------------|-----------|-------------------|---------|-------------------|-------------------------------|--------------|
| 174 | OROMIYA | ARSI | ASELA | STADIUM | Town | 359 | 244 | 734.6 |
| 175 | OROMIYA | ARSI | ASELA | CHILALO | Town | 214 | 127 | 641.4 |
| 176 | OROMIYA | ARSI | ASELA | BURKITU | Town | 342 | 215 | 679.4 |
| 177 | OROMIYA | WEST HARARGE | DARO LEBU | KOTERA | Rural | 238 | 242 | 1602.0 |
| 178 | OROMIYA | WEST HARARGE | DARO LEBU | HAREBA FANO | Rural | 154 | 172 | 1759.7 |
| 179 | OROMIYA | WEST HARARGE | DARO LEBU | GELGELE | Rural | 204 | 213 | 1645.1 |
| 180 | OROMIYA | WEST HARARGE | DARO LEBU | HARORESE KILE | Rural | 146 | 183 | 1974.8 |
| 181 | OROMIYA | WEST HARARGE | DARO LEBU | EDOGELMA | Rural | 118 | 168 | 2243.2 |
| 182 | OROMIYA | WEST HARARGE | DARO LEBU | DAROGUDO | Rural | 159 | 267 | 2645.8 |
| 183 | OROMIYA | EAST HARARGE | QERSA | WICHIRO | Rural | 183 | 172 | 1643.3 |
| 184 | OROMIYA | EAST HARARGE | QERSA | EMERONA SODU | Rural | 186 | 207 | 1945.7 |
| 185 | OROMIYA | EAST HARARGE | QERSA | BULULO NEGEYA | Rural | 197 | 205 | 1819.4 |
| 186 | OROMIYA | EAST HARARGE | QERSA | WALITAHA BILISUMA | Rural | 181 | 196 | 1893.2 |
| 187 | OROMIYA | EAST HARARGE | QERSA | BURAK JENETA | Rural | 152 | 228 | 2622.5 |
| 188 | OROMIYA | EAST HARARGE | DEDER | OBI KU AREANAME 2 | Rural | 249 | 317 | 1655.7 |
| 189 | OROMIYA | EAST HARARGE | DEDER | BIYO NEGAYA | Rural | 176 | 165 | 1219.2 |
| 190 | OROMIYA | EAST HARARGE | DEDER | KURE DEDER | Rural | 204 | 189 | 1204.9 |
| 191 | OROMIYA | EAST HARARGE | DEDER | WELTEHA GUDINA | Rural | 218 | 209 | 1246.8 |
| 192 | OROMIYA | EAST HARARGE | DEDER | BISHAN ADI | Rural | 175 | 232 | 1724.1 |
| 193 | OROMIYA | EAST HARARGE | DEDER | GOLU | Rural | 240 | 212 | 1148.8 |
| 194 | OROMIYA | EAST HARARGE | DEDER | HARENFEMA QUNI | Rural | 176 | 203 | 1500.0 |
| 195 | OROMIYA | EAST HARARGE | DEDER | GEGEWISA | Rural | 205 | 207 | 1313.2 |
| 196 | OROMIYA | BALE | GOLOLCHA | OURIGESA | Rural | 98 | 106 | 3323.1 |
| 197 | OROMIYA | BALE | GOLOLCHA | SELAM | Rural | 167 | 214 | 3937.0 |
| 198 | OROMIYA | BALE | GOLOLCHA | LEMILEM HALILA | Rural | 155 | 193 | 3825.5 |
| 199 | OROMIYA | BORENA | BULE HORA | SAKICHA | Rural | 236 | 203 | 1327.4 |
| 200 | OROMIYA | BORENA | BULE HORA | CHERE GULELICHA | Rural | 201 | 199 | 1527.8 |
| 201 | OROMIYA | BORENA | BULE HORA | BURIKA EBELA | Rural | 185 | 200 | 1668.3 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|---------|--------------------|------------|------------------|---------|-------------------|-------------------------------|--------------|
| 202 | OROMIYA | BORENA | BULE HORA | KILENISO RESA | Rural | 219 | 195 | 1374.1 |
| 203 | OROMIYA | BORENA | BULE HORA | KELECHA MURITI | Rural | 227 | 222 | 1509.2 |
| 204 | OROMIYA | BORENA | BULE HORA | ROPI MEGADE | Rural | 171 | 209 | 1886.1 |
| 205 | OROMIYA | SOUTH WEST SHEWA | ILU | MULU SATEY | Rural | 210 | 192 | 4928.8 |
| 206 | OROMIYA | SOUTH WEST SHEWA | ILU | KETA | Rural | 207 | 213 | 5547.1 |
| 207 | OROMIYA | GUJI | QERCHA | SERE SEBA | Rural | 207 | 188 | 1268.4 |
| 208 | OROMIYA | GUJI | QERCHA | HEBO MOLICHA | Rural | 179 | 209 | 1630.6 |
| 209 | OROMIYA | GUJI | QERCHA | ELFERIDA | Rural | 231 | 243 | 1469.1 |
| 210 | OROMIYA | GUJI | QERCHA | ARUSE DERISA | Rural | 204 | 219 | 1499.3 |
| 211 | OROMIYA | GUJI | QERCHA | ELEDIMA | Rural | 248 | 200 | 1126.3 |
| 212 | OROMIYA | GUJI | QERCHA | GALESA DIBISA | Rural | 248 | 217 | 1222.0 |
| 213 | OROMIYA | WEST ARSI | QORE | JEMA SERDO | Rural | 201 | 199 | 3335.9 |
| 214 | OROMIYA | WEST ARSI | QORE | SHERE KOMOBOLCHA | Rural | 169 | 176 | 3508.9 |
| 215 | OROMIYA | WEST ARSI | QORE | LENCH ONESHA | Rural | 228 | 200 | 2955.6 |
| 216 | OROMIYA | WEST ARSI | SHASHEMENE | ARADA | Town | 202 | 283 | 1309.6 |
| 217 | OROMIYA | WEST ARSI | SHASHEMENE | ALELU | Town | 147 | 241 | 1532.5 |
| 218 | OROMIYA | WEST ARSI | SHASHEMENE | AWASH | Town | 189 | 249 | 1231.5 |
| 219 | OROMIYA | WEST ARSI | SHASHEMENE | ABOSTO | Town | 218 | 360 | 1543.6 |
| 220 | OROMIYA | WEST ARSI | SHASHEMENE | BULCHANA DENEBA | Town | 166 | 171 | 962.9 |
| 221 | OROMIYA | HORO GUDRU WELLEGA | GUDURU | ELAMU TEREKO | Rural | 157 | 166 | 3589.3 |
| 222 | OROMIYA | HORO GUDRU WELLEGA | GUDURU | GUDENE KOBO | Rural | 218 | 279 | 4344.6 |
| 223 | SOMALE | SHINILE | AYSHA | MERMEDEBIS | Rural | 216 | 57 | 263.1 |
| 224 | SOMALE | SHINILE | SHINILE | JEDENE | Rural | 206 | 121 | 585.5 |
| 225 | SOMALE | SHINILE | AFDEM | BEKOLI | Rural | 78 | 84 | 1073.5 |
| 226 | SOMALE | JIJIGA | GURSUM | SHEK ABDUSELAM | Town | 186 | 145 | 777.1 |
| 227 | SOMALE | JIJIGA | JIJIGA | ZERO AND | Town | 200 | 228 | 398.6 |
| 228 | SOMALE | JIJIGA | JIJIGA | ZERO AND | Town | 173 | 418 | 844.9 |
| 229 | SOMALE | JIJIGA | JIJIGA | ZERO AMIST | Town | 188 | 228 | 424.1 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|--------|--------|-------------|---------------|---------|-------------------|-------------------------------|--------------|
| 230 | SOMALE | JIJIGA | JIJIGA | ZERO SIDIST | Town | 207 | 237 | 400.4 |
| 231 | SOMALE | JIJIGA | JIJIGA | ZERO SIDIST | Town | 223 | 749 | 1174.5 |
| 232 | SOMALE | JIJIGA | JIJIGA | DEBUB KORLEY | Town | 187 | 132 | 223.4 |
| 233 | SOMALE | JIJIGA | JIJIGA | DIDHEDA 3RD | Town | 89 | 94 | 334.2 |
| 234 | SOMALE | JIJIGA | JIJIGA | JEMABEHAD | Town | 159 | 128 | 254.8 |
| 235 | SOMALE | JIJIGA | JIJIGA | KEBELE | Town | 153 | 68 | 140.7 |
| 236 | SOMALE | JIJIGA | JIJIGA | KABELE YUSULE | Town | 44 | 34 | 244.5 |
| 237 | SOMALE | JIJIGA | KEBRI BEYAH | SIYAREDA | Town | 200 | 181 | 313.2 |
| 238 | SOMALE | JIJIGA | KEBRI BEYAH | BUSHALE | Rural | 160 | 140 | 302.9 |
| 239 | SOMALE | JIJIGA | KEBRI BEYAH | DERWALE | Rural | 201 | 111 | 191.1 |
| 240 | SOMALE | JIJIGA | KEBRI BEYAH | DA'A WALE | Rural | 182 | 125 | 237.7 |
| 241 | SOMALE | JIJIGA | KEBRI BEYAH | GERBIHARE | Town | 188 | 88 | 162.0 |
| 242 | SOMALE | JIJIGA | HARSHIN | GARABEDEN | Town | 151 | 146 | 369.7 |
| 243 | SOMALE | JIJIGA | HARSHIN | BOLAD | Town | 124 | 101 | 311.5 |
| 244 | SOMALE | JIJIGA | HARSHIN | GARA LEMOD | Town | 44 | 26 | 226.0 |
| 245 | SOMALE | JIJIGA | HARSHIN | HAWHASEN | Town | 82 | 31 | 144.6 |
| 246 | SOMALE | LIBEN | FILTU | DIBI | Town | 121 | 123 | 531.9 |
| 247 | SOMALE | LIBEN | FILTU | TURAYLE | Town | 124 | 102 | 430.4 |
| 248 | SOMALE | LIBEN | FILTU | BIFTU | Rural | 186 | 40 | 112.5 |
| 249 | SOMALE | LIBEN | FILTU | GUNWAY | Rural | 143 | 134 | 490.3 |
| 250 | SOMALE | LIBEN | DOLO ADO | BIYOLE | Rural | 197 | 115 | 345.6 |
| 251 | SOMALE | LIBEN | DOLO ADO | BERDELE | Town | 139 | 111 | 472.7 |
| 252 | SOMALE | LIBEN | DOLO ADO | RAMA | Town | 212 | 250 | 698.1 |
| 253 | SOMALE | LIBEN | MOYALE | MUBAREK | Town | 162 | 138 | 482.9 |
| 254 | SOMALE | LIBEN | MOYALE | SURURO | Town | 145 | 157 | 613.8 |
| 255 | SOMALE | LIBEN | MOYALE | ELGOF | Town | 170 | 187 | 623.6 |
| 256 | SOMALE | LIBEN | MOYALE | ELQUR | Town | 151 | 214 | 803.4 |
| 257 | SOMALE | LIBEN | MOYALE | KETEMA | Town | 156 | 60 | 218.0 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|-----------------------|--------------|--------------|---------------------|---------|-------------------|-------------------------------|--------------|
| 258 | SOMALE | LIBEN | MOYALE | ALULUKO | Rural | 173 | 83 | 272.0 |
| 259 | SOMALE | LIBEN | HUDET | BIMA | Rural | 123 | 59 | 438.8 |
| 260 | BENISHAN- GUL GUMZ | METEKEL | WENBERA | TERSHTGA | Rural | 186 | 121 | 265.7 |
| 261 | BENISHAN- GUL GUMZ | METEKEL | WENBERA | ADIS ALEM | Rural | 192 | 162 | 344.6 |
| 262 | BENISHAN- GUL GUMZ | METEKEL | WENBERA | MINIJO | Rural | 134 | 174 | 530.3 |
| 263 | BENISHAN- GUL GUMZ | METEKEL | WENBERA | SENIKORA | Rural | 255 | 286 | 458.0 |
| 264 | BENISHAN- GUL GUMZ | METEKEL | WENBERA | ETARI GOCHER | Rural | 156 | 170 | 445.0 |
| 265 | BENISHAN- GUL GUMZ | ASOSA | ASOSA | GENIGEN | Town | 196 | 163 | 219.6 |
| 266 | BENISHAN- GUL GUMZ | ASOSA | ASOSA | AGOLE | Town | 167 | 249 | 476.7 |
| 267 | BENISHAN- GUL GUMZ | ASOSA | ASOSA | ALUBO | Town | 158 | 363 | 800.4 |
| 268 | BENISHAN- GUL GUMZ | ASOSA | BAMBASI | JEMATSA | Rural | 135 | 180 | 621.4 |
| 269 | BENISHAN- GUL GUMZ | ASOSA | BAMBASI | GARABICHE METEMA | Rural | 139 | 85 | 285.0 |
| 270 | BENISHAN- GUL GUMZ | ASOSA | BAMBASI | SONIKA | Rural | 218 | 197 | 421.2 |
| 271 | BENISHAN- GUL GUMZ | ASOSA | BAMBASI | MUTSA MADO | Rural | 185 | 349 | 879.2 |
| 272 | BENISHAN- GUL GUMZ | PAWE SPECIAL | PAWE SPECIAL | KETENA 2 MENIDER 17 | Rural | 130 | 247 | 903.0 |
| 273 | BENISHAN- GUL GUMZ | PAWE SPECIAL | PAWE SPECIAL | KETENA 2 MENIDER 12 | Rural | 197 | 239 | 576.6 |
| 274 | BENISHAN- GUL GUMZ | PAWE SPECIAL | PAWE SPECIAL | KETENA 1 MENIDER 7 | Rural | 185 | 196 | 503.5 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|-----------------------|--------------|--------------------------|--------------------------|---------|-------------------|-------------------------------|--------------|
| 275 | BENISHAN- GUL GUMZ | PAWE SPECIAL | PAWE SPECIAL | KETENA 1 MENIDER 49 | Rural | 183 | 192 | 498.7 |
| 276 | SNNPR | GURAGE | EZHA | WADIYE | Rural | 378 | 179 | 1309.0 |
| 277 | SNNPR | GURAGE | EZHA | WASIMARI | Rural | 166 | 131 | 2181.5 |
| 278 | SNNPR | GURAGE | EZHA | YASIHURANA WARI- WUYA | Rural | 225 | 229 | 2813.5 |
| 279 | SNNPR | GURAGE | MUHOR NA AKLIL- WERED | BATINA KERAS | Rural | 202 | 182 | 2311.9 |
| 280 | SNNPR | GURAGE | MUHOR NA AKLIL- WERED | ACHENE | Rural | 203 | 199 | 2515.4 |
| 281 | SNNPR | GURAGE | MUHOR NA AKLIL- WERED | CHEMOBI | Rural | 197 | 169 | 2201.2 |
| 282 | SNNPR | GURAGE | BUTAJIRA/TOWN/ | KEBELE01 | Town | 233 | 248 | 1522.0 |
| 283 | SNNPR | GURAGE | BUTAJIRA/TOWN/ | KEBELE02 | Town | 177 | 135 | 1090.6 |
| 284 | SNNPR | GURAGE | BUTAJIRA/TOWN/ | KEBELE03 | Town | 217 | 300 | 1976.9 |
| 285 | SNNPR | HADIYA | ANALIMO | HAQGELA SENFE | Rural | 181 | 177 | 3640.7 |
| 286 | SNNPR | HADIYA | ANALIMO | WGILA ABARA | Rural | 145 | 128 | 3286.5 |
| 287 | SNNPR | SIDAMA | HAWASSA ZURIYA | GALO ARIGISA | Rural | 176 | 250 | 3025.8 |
| 288 | SNNPR | SIDAMA | HAWASSA ZURIYA | SHAMENA GERIMAMA | Rural | 195 | 199 | 2173.9 |
| 289 | SNNPR | SIDAMA | HAWASSA ZURIYA | JARA KERARA | Rural | 269 | 287 | 2272.7 |
| 290 | SNNPR | SIDAMA | BENSA | BETURO TATESA | Rural | 464 | 212 | 494.3 |
| 291 | SNNPR | SIDAMA | BENSA | ALO | Rural | 229 | 252 | 1190.5 |
| 292 | SNNPR | SIDAMA | BENSA | SHENITAWENE | Rural | 185 | 166 | 970.7 |
| 293 | SNNPR | SIDAMA | BENSA | SHENTA GOLBA | Rural | 210 | 293 | 1509.4 |
| 294 | SNNPR | SIDAMA | BENSA | SADA WARE | Rural | 212 | 174 | 887.9 |
| 295 | SNNPR | SIDAMA | BENSA | GONIJABE | Rural | 202 | 219 | 1172.9 |
| 296 | SNNPR | SIDAMA | BENSA | KERISA BUDISA | Rural | 223 | 224 | 1086.7 |
| 297 | SNNPR | SIDAMA | BENSA | OSOLE | Rural | 162 | 260 | 1736.2 |
| 298 | SNNPR | SIDAMA | CHERE | SIDISA KEDADO | Rural | 169 | 147 | 1913.5 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|--------|------------|-----------------------|------------------|---------|-------------------|-------------------------------|--------------|
| 299 | SNNPR | SIDAMA | CHERE | HORA ELA | Rural | 196 | 145 | 1627.4 |
| 300 | SNNPR | SIDAMA | CHERE | TARATU | Rural | 259 | 251 | 2131.9 |
| 301 | SNNPR | GEDEO | BULE | BASURA | Rural | 212 | 141 | 1560.4 |
| 302 | SNNPR | GEDEO | BULE | AGAMESA | Rural | 207 | 180 | 2040.1 |
| 303 | SNNPR | GEDEO | BULE | WEKADI BITU | Rural | 192 | 178 | 2175.1 |
| 304 | SNNPR | GEDEO | BULE | LAYURASA | Rural | 179 | 199 | 2608.3 |
| 305 | SNNPR | WOLAYITA | KINDO KOYISHA | FECHENA | Rural | 151 | 158 | 2484.1 |
| 306 | SNNPR | WOLAYITA | KINDO KOYISHA | FAJENA MATA | Rural | 161 | 183 | 2698.5 |
| 307 | SNNPR | WOLAYITA | KINDO KOYISHA | TEPA | Rural | 202 | 210 | 2468.1 |
| 308 | SNNPR | SOUTH OMO | SEMEN ARI | BALIKISHOKAYISET | Rural | 162 | 182 | 3680.1 |
| 309 | SNNPR | SOUTH OMO | SEMEN ARI | AFINETIFERA | Rural | 163 | 165 | 3315.9 |
| 310 | SNNPR | KEFA | DECHA | MUTI | Rural | 255 | 198 | 1391.7 |
| 311 | SNNPR | KEFA | DECHA | AGAROBUSHI | Rural | 202 | 176 | 1561.6 |
| 312 | SNNPR | KEFA | DECHA | DUBIYO | Rural | 215 | 205 | 1708.9 |
| 313 | SNNPR | KEFA | DECHA | YOKA | Rural | 219 | 218 | 1784.1 |
| 314 | SNNPR | KEFA | DECHA | ANGELA | Rural | 181 | 186 | 1841.8 |
| 315 | SNNPR | KEFA | BONGA/TOWN/ | ANDINET | Town | 128 | 116 | 1996.1 |
| 316 | SNNPR | KEFA | BONGA/TOWN/ | SHETA KENTERI | Town | 232 | 150 | 1424.1 |
| 317 | SNNPR | GAMO GOFA | ARIBA MINICH ZURIA | KOLA SHERA | Rural | 166 | 143 | 1277.0 |
| 318 | SNNPR | GAMO GOFA | ARIBA MINICH ZURIA | ZIGITI BAKOLE | Rural | 184 | 198 | 1595.1 |
| 319 | SNNPR | GAMO GOFA | ARIBA MINICH ZURIA | GATSE | Rural | 183 | 190 | 1539.0 |
| 320 | SNNPR | GAMO GOFA | ARIBA MINICH ZURIA | GENITA KENICHEMA | Rural | 267 | 179 | 993.8 |
| 321 | SNNPR | GAMO GOFA | ARIBA MINICH ZURIA | ZEYISEDEMIBELE | Rural | 186 | 185 | 1474.4 |
| 322 | SNNPR | BENCH MAJI | DEBUB BENCH | ZEMIKA | Rural | 150 | 127 | 1746.9 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|----------|---------------|------------------------|-------------------|---------|-------------------|-------------------------------|--------------|
| 323 | SNNPR | BENCH MAJI | DEBUB BENCH | ZOZO | Rural | 173 | 185 | 2206.3 |
| 324 | SNNPR | BENCH MAJI | DEBUB BENCH | SAYITU | Rural | 205 | 222 | 2234.3 |
| 325 | SNNPR | BENCH MAJI | DEBUB BENCH | GILETIN | Rural | 228 | 185 | 1674.1 |
| 326 | SNNPR | KONSO SPECIAL | KONSO SPECIAL | FUCHUCHA | Rural | 167 | 213 | 1500.0 |
| 327 | SNNPR | KONSO SPECIAL | KONSO SPECIAL | IYANA | Rural | 134 | 187 | 1641.2 |
| 328 | SNNPR | KONSO SPECIAL | KONSO SPECIAL | DORA | Rural | 219 | 205 | 1100.9 |
| 329 | SNNPR | KONSO SPECIAL | KONSO SPECIAL | DEBENO | Rural | 239 | 192 | 944.8 |
| 330 | SNNPR | KONSO SPECIAL | KONSO SPECIAL | GELGELENA QOLMALE | Rural | 206 | 218 | 1244.6 |
| 331 | SNNPR | KONSO SPECIAL | KONSO SPECIAL | MECHEQE | Rural | 183 | 210 | 1349.6 |
| 332 | SNNPR | SILTIE | SILTIE | ADBER WELIYA | Rural | 184 | 184 | 1458.9 |
| 333 | SNNPR | SILTIE | SILTIE | DANECH MUKERE | Rural | 175 | 204 | 1700.6 |
| 334 | SNNPR | SILTIE | SILTIE | GOFLOLA | Rural | 160 | 138 | 1258.3 |
| 335 | SNNPR | SILTIE | SILTIE | SEDA BARENGO | Rural | 206 | 202 | 1430.5 |
| 336 | SNNPR | SILTIE | SILTIE | ANSHOBESO | Rural | 175 | 178 | 1483.9 |
| 337 | SNNPR | SILTIE | SILTIE | GUTO WACHO | Rural | 209 | 226 | 1577.5 |
| 338 | SNNPR | HAWASSA CITY | HAWASSA CITY ADMINI | ADDIS KETEMA | Town | 194 | 284 | 448.3 |
| 339 | SNNPR | HAWASSA CITY | HAWASSA CITY ADMINI | HAYK DAR | Town | 270 | 247 | 280.1 |
| 340 | SNNPR | HAWASSA CITY | HAWASSA CITY ADMINI | MEHAL KETEMA | Town | 207 | 197 | 291.4 |
| 341 | SNNPR | HAWASSA CITY | HAWASSA CITY ADMINI | MISRAK | Town | 159 | 156 | 300.5 |
| 342 | SNNPR | HAWASSA CITY | HAWASSA CITY ADMINI | MENAHERIA | Town | 163 | 135 | 253.6 |
| 343 | SNNPR | HAWASSA CITY | HAWASSA CITY ADMINI | TABOR | Town | 141 | 145 | 314.9 |
| 344 | GAMBELLA | AGNEWAK | GAMBELLA ZURIYA | NYIKUWA | Rural | 135 | 176 | 136.6 |
| 345 | GAMBELLA | AGNEWAK | GAMBELLA ZURIYA | BONGA | Rural | 210 | 459 | 229.1 |
| 346 | GAMBELLA | AGNEWAK | GAMBELLA/TOWN/ | KEBELE 02 | Town | 186 | 101 | 141.1 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|-------------|------------------|------------------|----------------------|---------|-------------------|-------------------------------|--------------|
| 347 | GAMBELLA | AGNEWAK | GAMBELLA/TOWN/ | KEBELE 04 | Town | 187 | 214 | 297.5 |
| 348 | GAMBELLA | AGNEWAK | GAMBELLA/TOWN/ | KEBELE 05 | Town | 149 | 336 | 586.1 |
| 349 | GAMBELLA | MEJENGER | GODARE | KABO | Rural | 179 | 129 | 292.7 |
| 350 | GAMBELLA | MEJENGER | GODARE | GUMARI | Rural | 139 | 144 | 420.7 |
| 351 | GAMBELLA | MEJENGER | GODARE | TOLINA TOKALI | Rural | 215 | 169 | 319.2 |
| 352 | GAMBELLA | MEJENGER | GODARE | AKASHI | Rural | 195 | 284 | 591.5 |
| 353 | GAMBELLA | MEJENGER | GODARE | DUNCHAYE | Rural | 175 | 181 | 420.0 |
| 354 | HARARI | HARARI-ALL | HARARI-ALL | KEBELE 02 | Town | 268 | 233 | 1169.4 |
| 355 | HARARI | HARARI-ALL | HARARI-ALL | KEBELE 09 | Town | 136 | 174 | 972.2 |
| 356 | HARARI | HARARI-ALL | HARARI-ALL | KEBELE 12 | Town | 199 | 169 | 455.5 |
| 357 | HARARI | HARARI-ALL | HARARI-ALL | KEBELE 17 | Town | 179 | 172 | 1058.6 |
| 358 | HARARI | HARARI-ALL | HARARI-ALL | HASENGAE | Rural | 188 | 176 | 739.2 |
| 359 | HARARI | HARARI-ALL | HARARI-ALL | MIYAY | Rural | 233 | 216 | 866.0 |
| 360 | HARARI | HARARI-ALL | HARARI-ALL | ERER DODOTA | Rural | 190 | 202 | 790.4 |
| 361 | ADDIS ABABA | AKAKI KALITY | AKAKI KALITY | KEBELE 01/03 | Town | 240 | 254 | 2229.2 |
| 362 | ADDIS ABABA | AKAKI KALITY | AKAKI KALITY | KEBELE 01/03 | Town | 202 | 53 | 552.7 |
| 363 | ADDIS ABABA | AKAKI KALITY | AKAKI KALITY | KEBELE 10/11 | Town | 173 | 272 | 3311.7 |
| 364 | ADDIS ABABA | NEFAS SILK-LAFTO | NEFAS SILK-LAFTO | KEBELE 03/04/05 | Town | 123 | 105 | 1538.0 |
| 365 | ADDIS ABABA | NEFAS SILK-LAFTO | NEFAS SILK-LAFTO | KEBELE 09/14 | Town | 93 | 41 | 794.3 |
| 366 | ADDIS ABABA | NEFAS SILK-LAFTO | NEFAS SILK-LAFTO | KEBELE 12/13 | Town | 207 | 111 | 966.1 |
| 367 | ADDIS ABABA | NEFAS SILK-LAFTO | NEFAS SILK-LAFTO | KEBELE 01(HANA,LEBU, | Town | 256 | 115 | 809.4 |
| 368 | ADDIS ABABA | NEFAS SILK-LAFTO | NEFAS SILK-LAFTO | KEBELE 11 | Town | 241 | 213 | 1592.4 |
| 369 | ADDIS ABABA | KOLFE KERANIYO | KOLFE KERANIYO | KEBELE 01/05 | Town | 347 | 149 | 501.3 |
| 370 | ADDIS ABABA | KOLFE KERANIYO | KOLFE KERANIYO | KEBELE 08/09 | Town | 203 | 185 | 1063.9 |
| 371 | ADDIS ABABA | KOLFE KERANIYO | KOLFE KERANIYO | KEBELE 10/11 | Town | 157 | 380 | 2825.5 |
| 372 | ADDIS ABABA | KOLFE KERANIYO | KOLFE KERANIYO | KEBELE 15/16 | Town | 186 | 137 | 859.9 |
| 373 | ADDIS ABABA | KOLFE KERANIYO | KOLFE KERANIYO | KEBELE 07 | Town | 170 | 131 | 899.6 |
| 374 | ADDIS ABABA | KOLFE KERANIYO | KOLFE KERANIYO | KEBELE 04 | Town | 211 | 188 | 1040.1 |

| EA No | Region | Zone | Woreda | Kebele | Cluster | CSA EA HH Size | HH Size (Fresh Listing) | Final Weight |
|-------|-------------|--------------|---------------|-------------------|---------|-------------------|-------------------------------|--------------|
| 375 | ADDIS ABABA | GULELE | GULELE | KEBELE 07/17 | Town | 215 | 171 | 2374.1 |
| 376 | ADDIS ABABA | GULELE | GULELE | KEBELE 09/15 | Town | 160 | 61 | 1138.0 |
| 377 | ADDIS ABABA | GULELE | GULELE | KEBELE 19/20/21 | Town | 446 | 135 | 903.5 |
| 378 | ADDIS ABABA | GULELE | GULELE | KEBELE 10/18 | Town | 180 | 126 | 2089.5 |
| 379 | ADDIS ABABA | KIRKOS | KIRKOS | KEBELE 05/06/07 | Town | 211 | 135 | 2512.3 |
| 380 | ADDIS ABABA | KIRKOS | KIRKOS | KEBELE 13/14 | Town | 228 | 141 | 2428.3 |
| 381 | ADDIS ABABA | KIRKOS | KIRKOS | KEBELE 04 | Town | 110 | 82 | 2927.2 |
| 382 | ADDIS ABABA | ADDIS KETEMA | ADDIS KETEMA | KEBELE 04/05 | Town | 190 | 148 | 3010.2 |
| 383 | ADDIS ABABA | ADDIS KETEMA | ADDIS KETEMA | KEBELE 10/11/12 | Town | 124 | 115 | 3583.9 |
| 384 | ADDIS ABABA | ADDIS KETEMA | ADDIS KETEMA | KEBELE 19/20 | Town | 159 | 139 | 3378.3 |
| 385 | ADDIS ABABA | YEKA | YEKA | KEBELE 03/04 | Town | 216 | 247 | 1290.4 |
| 386 | ADDIS ABABA | YEKA | YEKA | KEBELE 08/15 | Town | 144 | 105 | 822.8 |
| 387 | ADDIS ABABA | YEKA | YEKA | KEBELE 16/17/18 | Town | 237 | 452 | 2152.1 |
| 388 | ADDIS ABABA | YEKA | YEKA | KEBELE 20/21 | Town | 233 | 237 | 1147.8 |
| 389 | ADDIS ABABA | YEKA | YEKA | KEBELE 13/14 | Town | 192 | 142 | 834.6 |
| 390 | DIRE DAWA | DIRE DAWA | DIRE DAWA-ALL | KEBELE 01 | Town | 177 | 194 | 1259.7 |
| 391 | DIRE DAWA | DIRE DAWA | DIRE DAWA-ALL | KEBELE 02 | Town | 166 | 225 | 270.7 |
| 392 | DIRE DAWA | DIRE DAWA | DIRE DAWA-ALL | KEBELE 03 | Town | 130 | 75 | 253.1 |
| 393 | DIRE DAWA | DIRE DAWA | DIRE DAWA-ALL | KEBELE 04 | Town | 102 | 80 | 318.2 |
| 394 | DIRE DAWA | DIRE DAWA | DIRE DAWA-ALL | KEBELE 06 | Town | 146 | 121 | 485.8 |
| 395 | DIRE DAWA | DIRE DAWA | DIRE DAWA-ALL | KEBELE 08 | Town | 186 | 136 | 308.8 |
| 396 | DIRE DAWA | DIRE DAWA | DIRE DAWA-ALL | KEBELE 09 | Town | 214 | 352 | 484.9 |
| 397 | DIRE DAWA | DIRE DAWA | DIRE DAWA-ALL | HULAHULUL ASALISO | Rural | 142 | 161 | 1175.2 |
| 398 | DIRE DAWA | DIRE DAWA | DIRE DAWA-ALL | LEGA ODA MIRGA | Rural | 168 | 151 | 879.8 |
| 399 | DIRE DAWA | DIRE DAWA | DIRE DAWA-ALL | AWALE | Rural | 201 | 203 | 835.5 |
| 400 | DIRE DAWA | DIRE DAWA | DIRE DAWA-ALL | BELEWA | Rural | 198 | 388 | 2782.8 |

| | | | | | | | | | | | | | | | | | | | |
|------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Identification # | | | | | | | | | | | | | | | | | | | |
|------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

FMOH, FENOT and BIC

SECTION C 1: UTILIZATION OF OUT PATIENT AND OTHER HEALTH RELATED SERVICES IN PAST FOUR WEEKS

This section is for all household members whose response was a “Yes” in Questions 20, 21, 22, 25 and 26 (section B)

| | | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| Household membership number for the person who Consulted/sought /visited health provider for health care (as appearing in Q2021, 22 Q25 and 26) | VISIT 1 | VISIT 2 | VISIT 3 | VISIT 4 |
| 29.1 How many out patient visits did <Name> make in the last four weeks: _____ (number) <i>(Get information ONLY for last four visits)</i> | | | | |

| | | | | |
|--|--------------------|--------------------|--------------------|--------------------|
| Household membership number for the person who Consulted/sought /visited health provider for health care (as appearing in Q20 21, 22 Q25 and 26) | VISIT 1 | VISIT 2 | VISIT 3 | VISIT 4 |
| 29. 2 How many out patient visits did <name> make in the last four weeks: _____ (number) <i>(Get information ONLY for last four visits)</i> | | | | |

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| Household membership number of the in-patient service user: | Household membership no. | | Household membership No: | | Household membership no.: | | Household membership no. | |
|--|--------------------------|--------------------|--------------------------|--------------------|---------------------------|--------------------|--------------------------|--------------------|
| | Adm1/Ciisanii | Adm2/Ciisanii | Adm1/Ciisanii | Adm2/Ciisanii | Adm1/Ciisanii | Adm2/Ciisanii | Adm1/Ciisanii | Adm2/Ciisanii |
| 13) More privacy | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 14) Was referred | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 15) Don't know | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 16) Other (specify) | | | | | | | | |
| Do NOT read options (Multiple answers acceptable) | | | | | | | | |
| 71. What were the main reasons for (name) seeking admission: (multiple choices allowed) Enumerator probe to ensure no reason is missed] | | <i>Circle code</i> | <i>Circle code</i> | <i>Circle code</i> | <i>Circle code</i> | <i>Circle code</i> | <i>Circle code</i> | <i>Circle code</i> |
| A) Illness – | | | | | | | | |
| A1 infectious parasitic Diseases - | | | | | | | | |
| 1) Malaria - | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2) Diseases of Respiratory including pneumonia - | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3) TB - | | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4) HIV/AIDS - | | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5) Diarrhoea- | | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6) Intestinal worms - | | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7) Vaccine preventable diseases - | | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 8) Neglected tropical diseases - | | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9) Other infectious and parasitic diseases - | | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| A.2 Nutritional deficiencies (severe malnutrition) – | | | | | | | | |
| A.3. Non-communicable diseases – | | | | | | | | |
| 1. Cancer - | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 2. Diabetics - | | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 3. kidney failure - | | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 4. Mental disorders - | | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| | | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| A4. Injuries and other conditions - | | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| b) Services - | | | | | | | | |
| 1) Delivery - | | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| 2) Caesarean - | | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| 3) vaginal delivery - | | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| 4) Sterilization - | | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| 5) Treatment/surgery for reproductive health related cancers etc. – | | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 6) Community management of Acute malnutrition – | | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| 7) Other Services (specify) – | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |

FMOH, FENOT and BIC

| 76. Where did <NAME> get the funds to pay for the services and how much was paid from each source | <i>Source of funds</i> | <i>Enter Amount Eth. Birr</i> |
|---|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| <i>Interviewer:- Amounts paid by source should correspond to each admission</i> | 1) Had cash available | | | | | | | | |
| | 2) Was given money (by friends, relatives & family members) | | | | | | | | |
| | 3) Neighbourhood/Edir contributions | | | | | | | | |
| | 4) Borrowed money | | | | | | | | |
| | 5) Sold household assets/animals/farm products | | | | | | | | |
| | 6) Sold or rented land | | | | | | | | |
| | 7)Don't Know (enter -99) - | | | | | | | | |
| 77. Who provided drugs and pharmaceuticals? (Multiple answers acceptable) | | <i>Enter code(s)</i> |
| 78. Was <name> satisfied with the quality of care that he/she received from <name> health facility? | | <i>Enter code</i> |

FMOH, FENOT and BIC

| | | Household number: | | Household number: | | Household number: | | Household number: | |
|--|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| | | Adm1 Enter code | Adm2 Enter code |
| 79. How do you rate the following aspects of quality of care in the facility you visited? 1) Very Satisfied – 2) Satisfied – 3) Not satisfied – 4) Not at all satisfied – 5) Don't know – Note to interviewer: You MUST READ the above choices for each quality indicator | 1) Time spent with the Clinician - | | | | | | | | |
| | 2) Waiting time after getting doctor's decision to be admitted - | | | | | | | | |
| | 3) Courtesy of staff - | | | | | | | | |
| | 4) Availability of drugs - | | | | | | | | |
| | 5) Availability of lab/diagnostics - | | | | | | | | |
| | 6) Cleanliness of facility/wards - | | | | | | | | |
| | 7) Bed linen - | | | | | | | | |
| | 8) Food quality - | | | | | | | | |
| | 9) Consultation Privacy - | | | | | | | | |
| | 10) Motivation of staff | | | | | | | | |
| | 11) Skill of providers | | | | | | | | |
| 80.A How long did it take <name> to get to the health provider and back (round trip)? Enter -99 = for those who don't know | | Hrs____ Min____ |
| 80B). How long did it take <name> to be admitted (time between doctor's decision and admission)? Enter -99 = for those who don't know 9 | | Hrs____ Min____ |
| 81. What distance did <name> cover in KMs to get to the inpatient facility and back (Round trip) Enter -99 = for those who don't know | | _____ kms |
| 82. How much did <name> spend on transport (round trip), including transportation cost of person who accompanied <name>, if any If don't know enter -99 | | Birr_____ |
| 83. Did any member of your household /firend/neighbours accompany<NAME> during his/her hospital stay? 1. Yes (go to Q84) 2. No (go to Section D) | | Enter code |
| 84. If yes in Q83, for how many days was <name> accompanied? | | Days |
| 85. Indicate the household membership number for the person who accompanied <name> to the health provider (to be filled by interviewer) Fill Line number or "Not household member" | | Insert No. |

Note: Start next column/admission, otherwise provide information for the next person as appropriate

SECTION D: MORTALITY
Kutaa D: Lubbuun darbuu (Du'aa)

86 A. Is there a **Household member** who lived in this household and died in **the last 12 months** (do not include foetuses).

1. Yes (Go to 86B)
2. No (go to section E)

86B. If yes to Q 86A, how many have died? _____

| M | 87 | 88 | 89 | 90 |
|--------------------------------|--|--|---|--|
| Line number of Deceased Person | What was the relationship of (deceased) to head of household? 1 Wife/Husband/Partner – 2 Co-Wife – 3 Son or Daughter – 4 Sister/Brother – 5 Son or Daughter in-law – 6 Grandchild – 7 Parent– 8 Parent in-law – 9 Other Relatives – 10 Adopted/Foster/ Stepchild – 11 Not related – 12 Other (specify) – 13 Don't Know – Enter Code | What was the sex of Deceased Person 1. Male - 2. Female - Enter Code | Did the deceased receive health services before he/she died? 1 Yes (go to Q90) – 98. No (go to section E) – Enter Code | If yes to Q89, how much did the household spend on treatment for the deceased in the last 12 months? Enter amount in Eth Birr. |
| M1 | | | | |
| M2 | | | | |
| M3 | | | | |
| M4 | | | | |
| M5 | | | | |
| M6 | | | | |
| M7 | | | | |
| M8 | | | | |
| M9 | | | | |
| M10 | | | | |
| M11 | | | | |
| M12 | | | | |

| Monthly household expenditures | | |
|---|---|------------------------------|
| 116 | How much does your household spend per month on the following? | Amount (Eth. Birr) |
| | 1) Cosmetics - | |
| | 2) Soap and detergents – | |
| | 3) Hair dressing – | |
| | 4) Cigarettes/Pipes - | |
| | 5) Chat/khat - | |
| | 6) Rent (house rent? specify)- | |
| | 7) Electricity - | |
| | 8) Water - | |
| | 9) Kerosene – | |
| | 10) Telephone - | |
| | 11) Transport - | |
| | 12) Charcoal - | |
| | 13) Fire wood – | |
| | 14) Cooking gas – | |
| | 15) Remittances (in cash and kind) - | |
| | 16) Fuel (e.g. Petrol, diesel etc.) – | |
| | 17) Others (Specify) – | |
| | 17) TOTAL or estimate: | Total amount _____ Eth. Birr |
| Annual household expenditures – Respondent: Preferably husband and wife together | | |
| 117 | How much did your household spend in the last 12 months on following? | Amount (Eth. Birr) |
| | 1) Education (registration, uniforms, books, tuition, exam fees) | |
| | 2) Maintenance and repairs of buildings and vehicles | |
| | 3) Holiday | |
| | 4) Clothing and footwear | |
| | 5) Wedding/dowry (give examples, gifts, food, drinks, money, clothes for going on wedding) | |
| | 6) Funerals/Tezkar/Mahber can appear as a separate response item. (money, cereals, food, drinks, etc. incl. idir) | |
| | 7) Major purchases/constructions (vehicles, land, house, furniture, ox, cow, horse, camel, fertilizer, improved seeds,etc). Adding machine required | |

