



# Results from the 2015 Ethiopia National Malaria Indicator Survey

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## Background

- Ethiopia has documented gains in malaria prevention and control in the past decade.
- To document this progress and to measure attainment of goals set in the 2011–2015 National Malaria Strategic Plan, Ethiopia has conducted periodic national household malaria indicator surveys.
- The most recent Ethiopia Malaria Indicator Survey (EMIS) was conducted in 2015, following the 2007 and 2011 surveys.
- EMISs complement routine data collection (e.g., HMIS).

### Major objective:

To measure the progress toward achieving the goals and objectives of the Ethiopia National Strategic Plan 2011–2015.

### Outcomes:

- Estimates of malaria control intervention access, coverage, and use.
- Estimates of prevalence of fever and anemia among children under five years of age and prevalence of malaria parasitemia for all age groups.
- Estimates of knowledge, attitude, and practices of women of reproductive age (15–49 years).

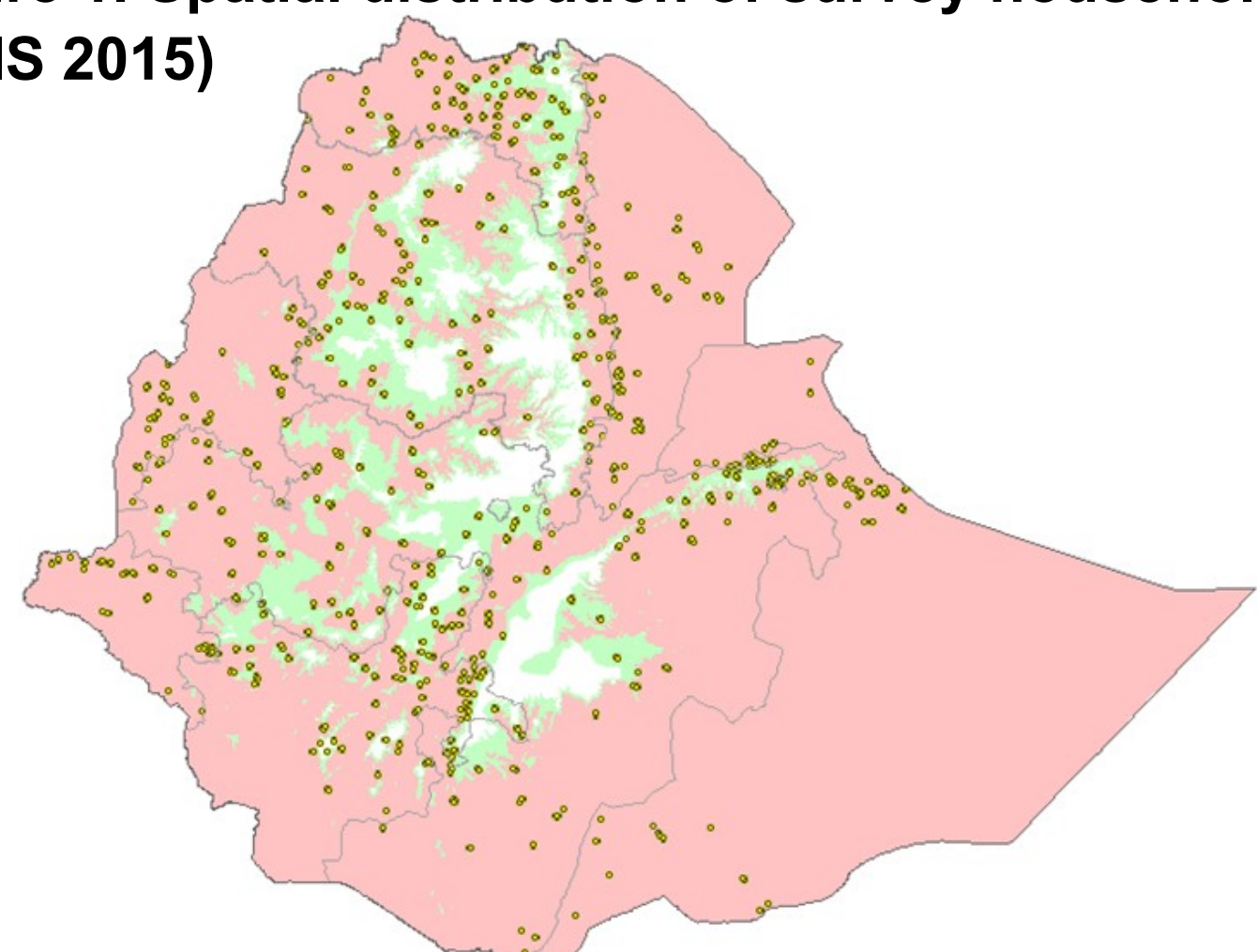
## Methods

- Adapted the Roll Back Malaria Monitoring and Evaluation Reference Group-standardized MIS instruments and protocol.
- Stratified two-stage cluster sample design.
- Representative probability sample to produce estimates for:
  - National: urban and rural for enumeration area (EA) mean altitude of  $\leq 2,000$ m above sea level (ASL).
  - National: EA mean altitude of  $> 2,000$  and  $\leq 2,500$ m ASL.
  - Regional sub-national for EA mean altitude of  $\leq 2,000$ m ASL.
- Non-malaria-endemic districts were excluded based on altitude.
- 555 EAs selected.
- 25 households randomly selected from each EA for a total of 13,875 households.

## Results

- A total of 13,789 households and 54,768 people surveyed.
- Household questionnaire response rate: 97%.
- Women's questionnaire response rate: 91%.

Figure 1. Spatial distribution of survey households (EMIS 2015)



## Results continued

Figure 2. Age pyramids of sampled population (EMIS 2015)

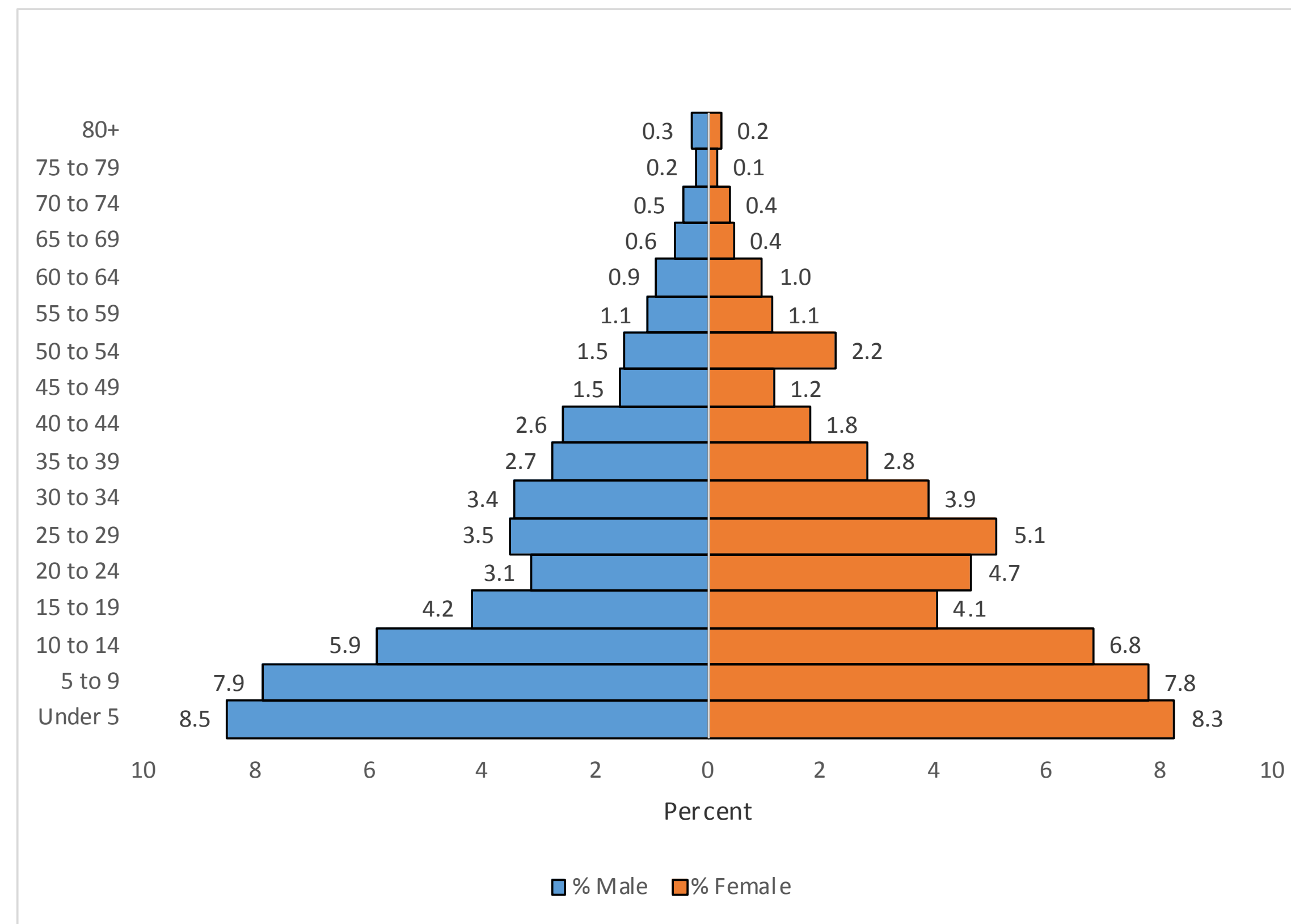
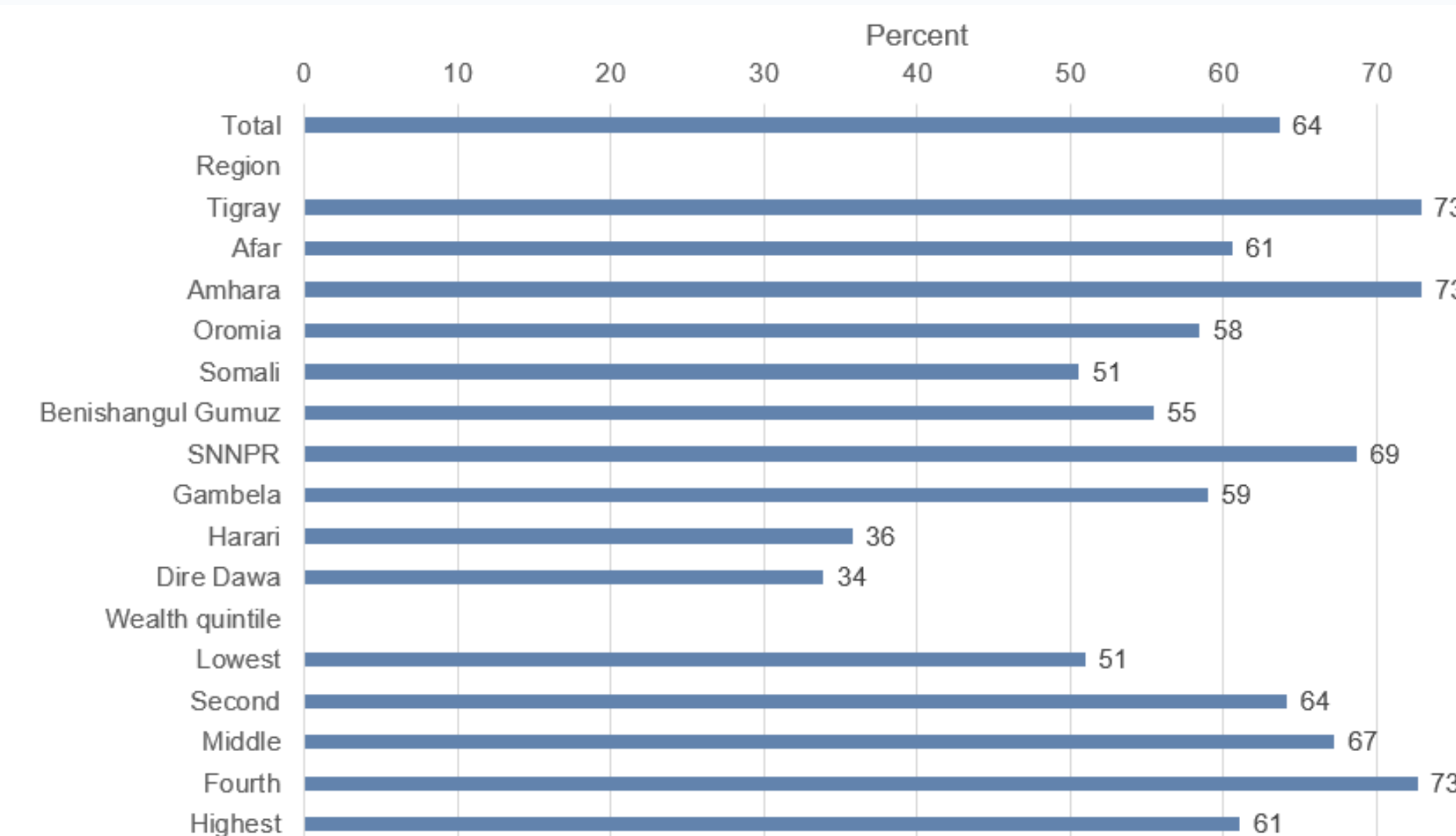


Table 1. Key indicators for areas under 2000m above sea level

1	Percentage of households that have at least one net	64
2	Percentage of households with at least one net for every two persons	31.7
3	Access to mosquito nets	49.2
4	Percentage who slept under a net last night	40
5	Percentage who slept under a net last night in a household with at least one net	61.4
6	Average number of nets per household	1.18
7	Percentage of children under age five years who slept under a net	45.3
8	Percentage of children under age five years who slept under a net in HHs with at least one net	70
9	Percentage of pregnant women who slept under a net last night	44.3
10	Percentage of pregnant women who slept under a net last night in a household that owned at least one net	74
11	Percentage of households sprayed in the last 12 months	29
12	Percentage of households protected by at least one net and/or IRS	71
13	Percentage of children with fever in the last two weeks	16
14	Percentage of children with a fever who sought treatment from a facility/health provider	33.2
15	Percentage positive for malaria by microscopy ( <i>Pf</i> , <i>Pv</i> or mixed and <i>Pv</i> )	0.5
16	Percentage positive with RDT ( <i>Pf</i> , <i>Pv</i> , or mixed and <i>Pv</i> )	1.2
17	Percentage of children under five with hemoglobin $< 8.0$ g/dl	6.0
18	Percentage of women who had heard of malaria	68.4
19	Percentage women who recognize fever as a symptom of malaria	75
20	Among women who had heard of malaria, percentage who reported mosquito nets as a prevention method	77

Figure 3. Percentage of households with at least one LLIN by region and wealth quintile

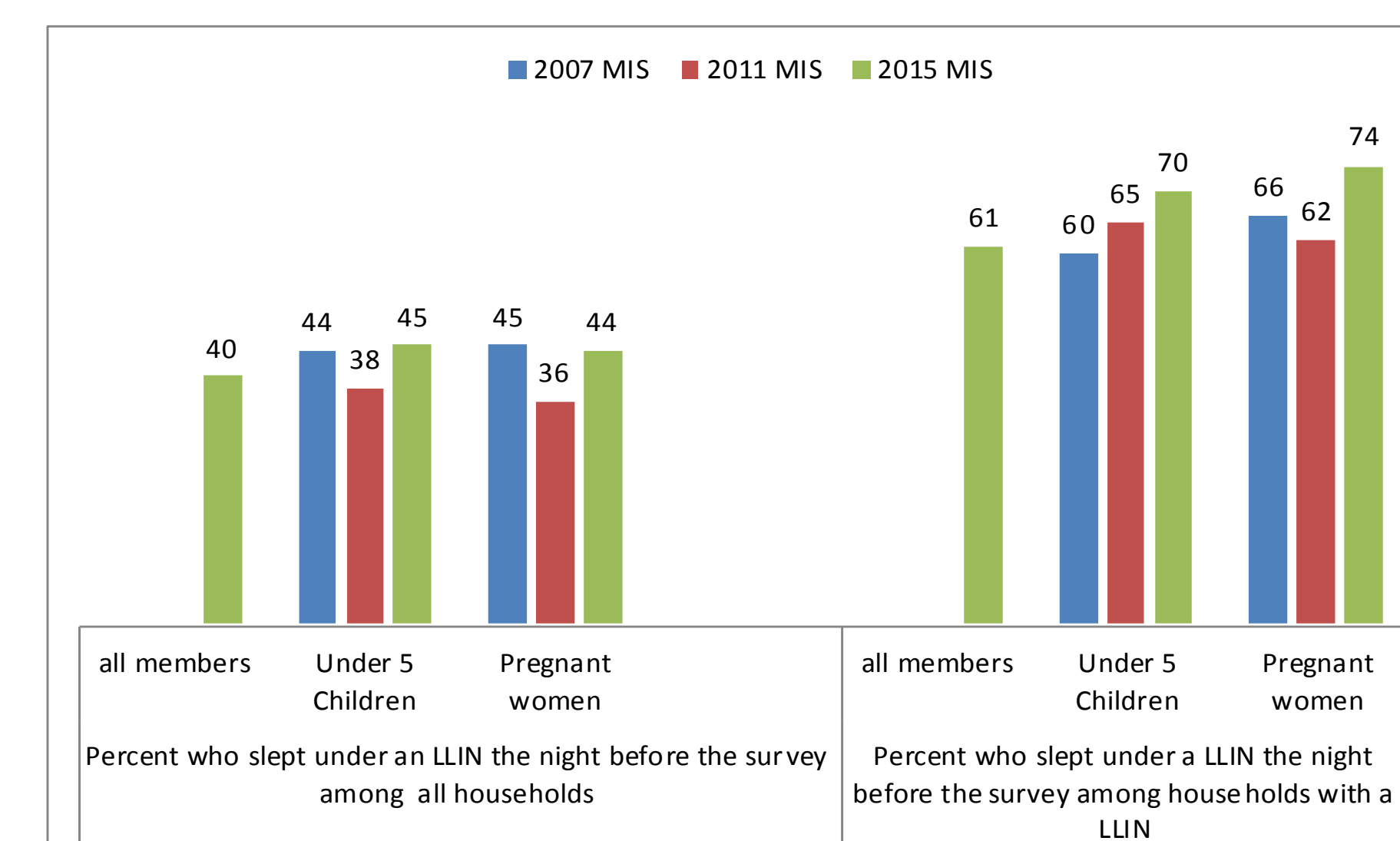


## Comparison of MIS results

### Long-lasting insecticide-treated bednet use

- 44 percent of pregnant women and 45 percent of children under five years of age slept under an LLIN the night before the survey.
- In households owning at least one LLIN, use by children and pregnant women was 70 percent and 74 percent, respectively.

Figure 4. Trends in use of LLINs (Ethiopia 2007, 2011, and 2015)



### Indoor residual spraying

- 29 percent of all households were sprayed in the 12 months preceding the survey.
- Overall, 71 percent of households are protected either by a net or IRS, similar to MIS 2011.

### Case management

- Malaria prevalence was 0.5 percent and 1.2 percent by microscopy and RDT, respectively.
- By region, Gambella (6%) and Benishangul-Gumuz (3%) reported the highest prevalence by microscopy.
- Malaria prevalence in areas  $> 2,000$ m and  $\leq 2,500$ m ASL was less than 0.1 percent.

Figure 6. Trends in malaria prevalence by RDT and microscopy (EMIS 2007, 2011, and 2015)

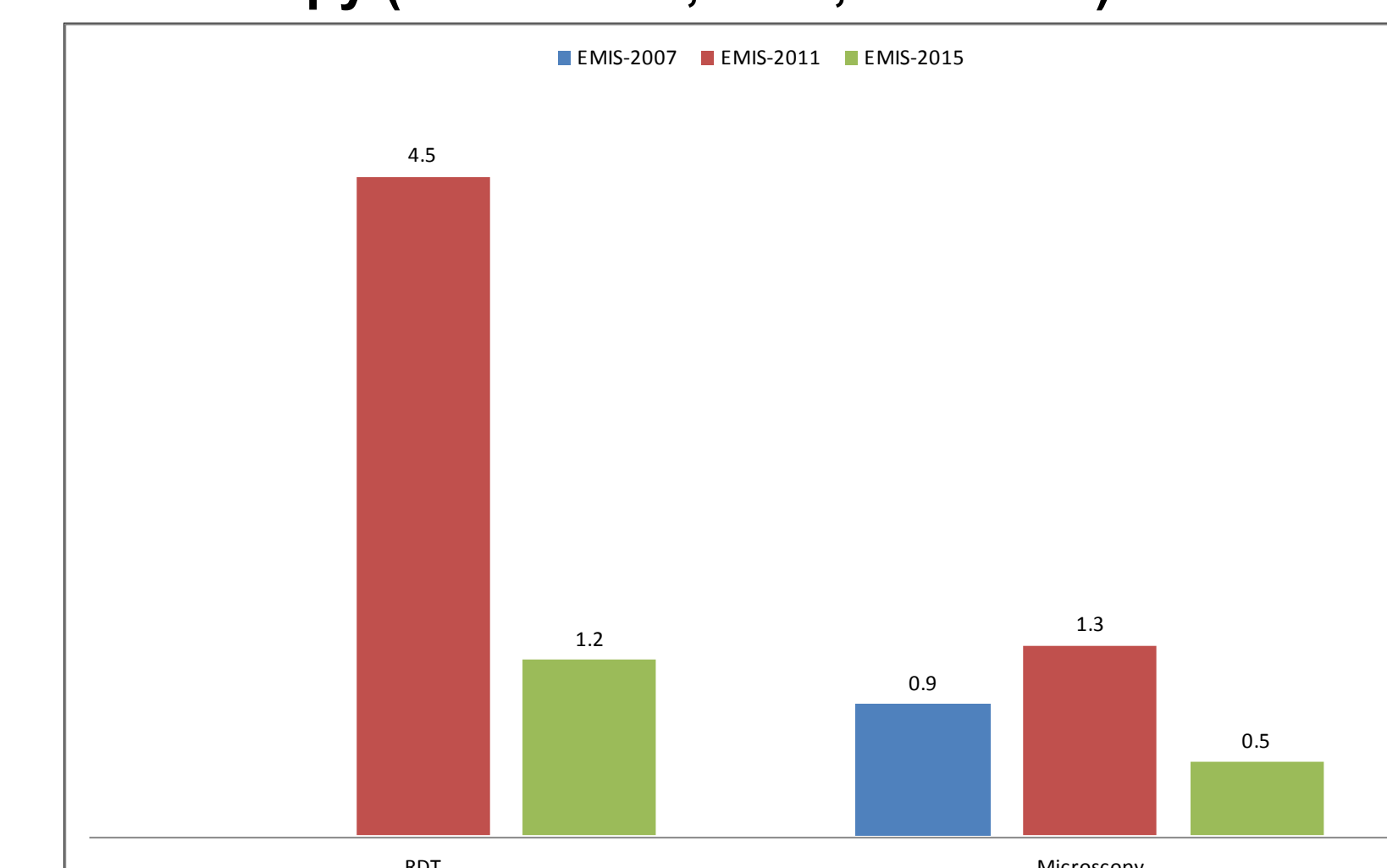
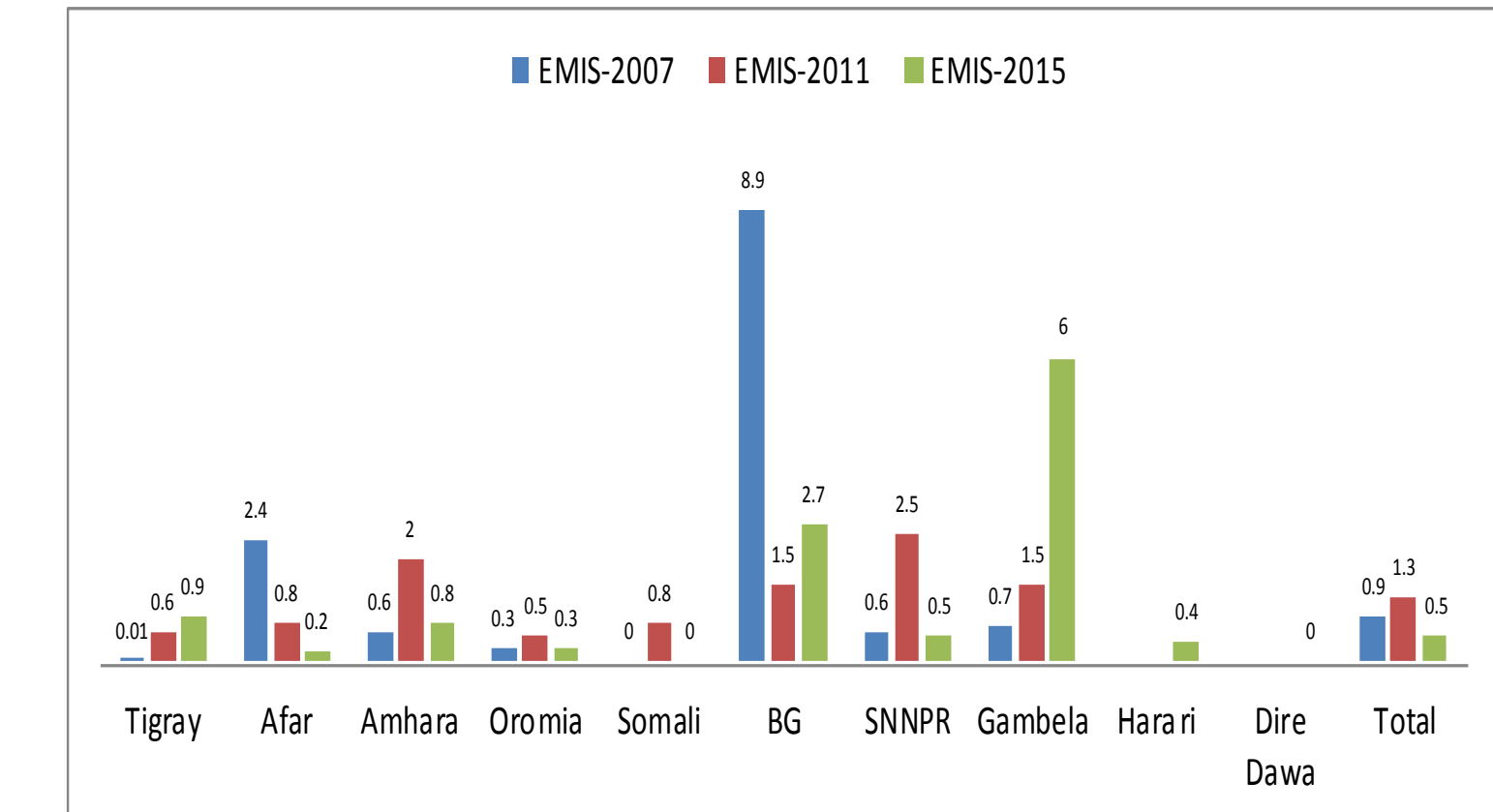
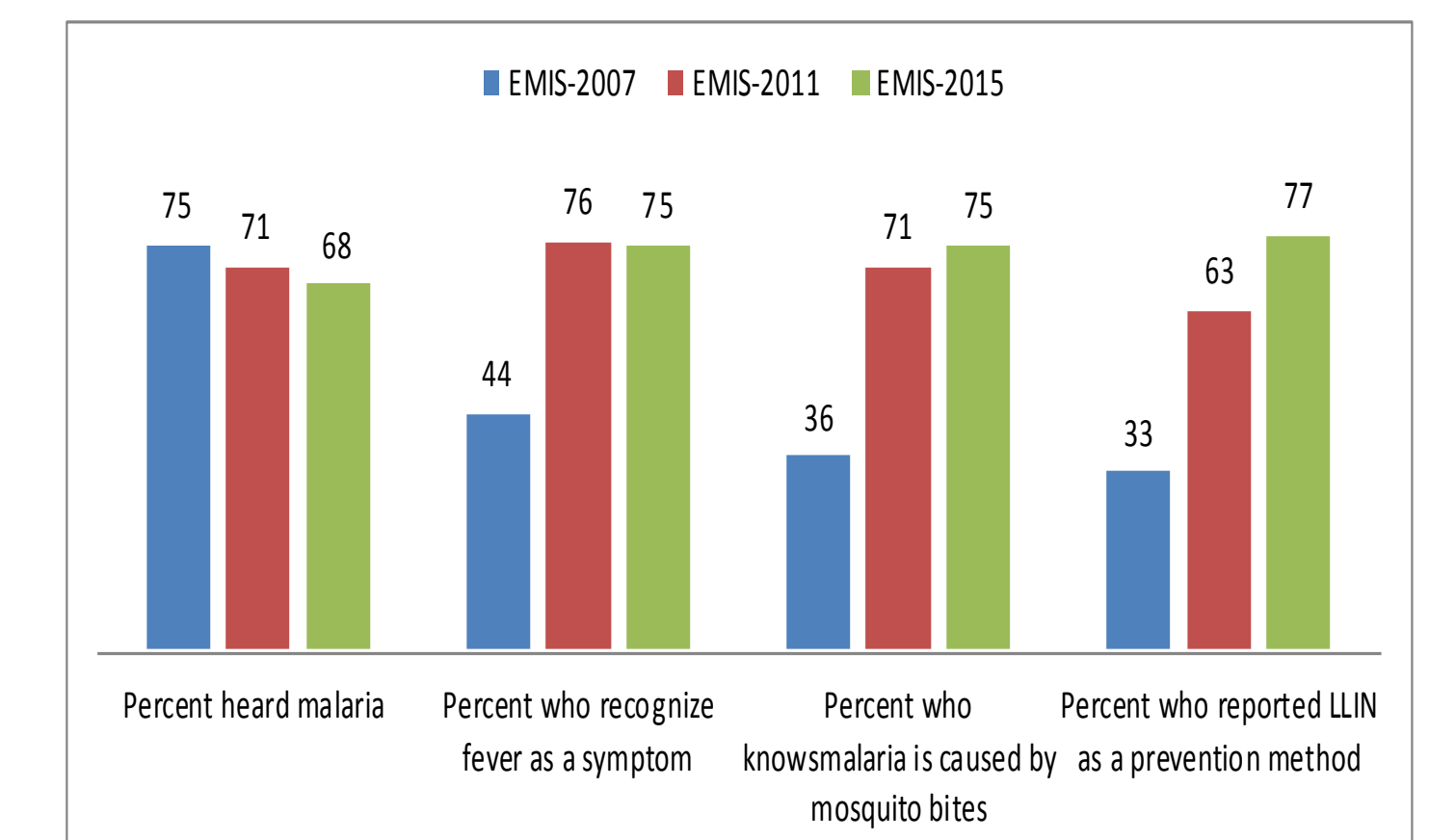


Figure 5. Trends of malaria prevalence among all age groups by microscopy (EMIS 2007, 2011, and 2015)



### Women's malaria knowledge

Figure 7. Trends in women's malaria knowledge and practice (Ethiopia 2007, 2011, and 2015)



## Conclusions and recommendations

- There have been improvements in malaria intervention coverage and use from 2007 to 2015.
- The results of the 2015 EMIS showed that while access to LLINs has improved and low prevalence of malaria has been maintained, there are gaps in utilization of some interventions, especially in low transmission areas.
- Malaria interventions should be tailored to meet the needs of different transmission settings to ensure that program goals to achieve zero transmission, as described in the National Malaria Control and Elimination Guidelines, are met.

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