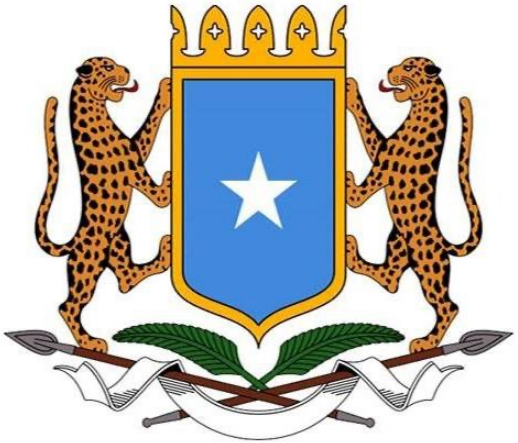
Assessment of LLINs Ownership and Use in 26 Selected Districts in Somalia



Federal Republic of Somalia

Ministry of Health & Human Services

unicef

for every child

Introduction to Malaria Control in Somalia

- The **Federal Ministry of Health**, **UNICEF**, and partners are working to nearly eliminate malaria in across Somalia.
- A key method is using Long-Lasting Insecticidal Nets (LLINs), especially in high-risk areas.
- In 2016, only 27.1% of households owned nets, even after mass distribution efforts.
- Many children are still in danger from malaria.

Global Best Practices

- Since 2000, LLINs, indoor spraying, and better treatment have reduced malaria worldwide.
- Giving out free nets widely helps ensure more people have them, compared to selling them in clinics or markets.

LLIN Distribution in Somalia

- From 2018 to 2020, LLINs were widely distributed with support from the Global Fund.
- Reports claimed high coverage, but there wasn't enough independent data to confirm this.

Data and Evidence Gaps

- A 2019 survey found over 90% of people in some areas owned and used LLINs.
- However, the findings weren't strong enough to guide future planning.

Next Steps

- In 2022 survey was done to check net coverage, ownership, and usage.
- The aim is to understand what affects LLIN access and improve future programs.

Overall & Specific Objectives

- **Main Goal:** To check how well people in 26 districts own and use mosquito nets (LLINs) after the 2022 distribution.

Specific Goals:

- ✓Measure how many households got and used LLINs in 2022.
- ✓See how well LLIN use matches the National Malaria Strategy.
- ✓Focus on how vulnerable and marginalized groups are using LLINs.
- ✓Understand people's attitudes and social factors that affect LLIN use.
- ✓Find out what helps or prevents proper LLIN use in homes.

METHODOLOGY

- The study focused on how people use and own mosquito nets (LLINs).
- It used both **Quantitative** & **Qualitative** to gather information.
- The WHO coverage cluster survey method was utilized to select communities for the study
- A total of **7,436 households** in **26 districts** were targeted.
- In each district, 22 groups (clusters) were randomly picked, and 13 people from each group were interviewed.
- **7,106 people** were interviewed successfully, with a high response rate of **95.6%**.

Methodology (continued):

- Basic statistics were used to understand the data.
- Logistic regression was applied to explore differences in net use based on people's background and economic status.
- The study used a 95% confidence level, with significance set at **$P < 0.05$** which is statistically significant.
- Interviews were also analyzed to understand community and stakeholder views through narrative analysis.

Findings/Results

Household Information

- Slightly more women (52.4%) than men (47.6%) participated in the study.
- 85% of respondents were married, and 74% were household heads.
- On average, households had 5.2 members, with a nearly equal split between females and males.
- Most households (62.8%) were permanent residents. Others included:
  - **Internally Displaced Persons (IDPs):** 33.1%
  - **Pastoralists:** 3.8%
  - **Refugees/returnees:** 0.4%
- Households were grouped into three wealth levels: poorest (34.3%), poor (32.9%), and least poor (32.8%).
- Most participants (74.3%) lived in urban areas, while 25.7% were in rural areas.

LLINs Ownership

- **Net Ownership:** 79% of households had mosquito nets. The highest ownership was in Bay region (90%) and Hiran (87.4%), while the lowest was in Bari (60.7%) and Lower Juba (57.6%).

- **By Household Type:** IDPs had the highest ownership (81.3%), followed by permanent residents (79.4%) and urban households (82.2%). Pastoralist and rural households had lower ownership rates.

- **Average Nets:** Each household had about 3.3 nets for 5.2 people. That's 1.9 people per net—slightly above WHO's ideal of 1.8.

- **Types of Nets:** Most nets were LLINs (81.8%) and other treated Nets (7.7%), untreated (10.5%).

- **Source of Nets:** Most nets (73.6%) came from mass campaigns by partners like GFATM/UNICEF. Some came from local NGOs or relatives (10.1%).

LLINs Ownership

- **When nets were received:** 83.2% of households had received nets less than a year before the survey during a mass campaign.
- **Net condition:** 61.3% were in good condition.
  - 26.6% had small holes.
  - 12.2% had large holes.
- **NGO Distribution:** 59% got nets over 6 months before the survey.
  - 35.7% got them within 5–6 months.
  - 5.3% got them within 4 months.
- Each household got an average of 2.8 nets.
- **Households without nets:**
  - 21% had no nets, mostly in Bardhere (48.4%), Kismayo (42.4%), and Bosaso (39.3%).
  - **Reasons:** no money (56.4%), lack of knowledge (19.2%), or nets not available (16%).
- **Attitudes:**
  - 70.2% said they would use nets if provided.
  - 24.4% said they would use them regularly.

Use Of Insecticide-Treated Nets

- **Net usage:**
  - 95.8% of households with nets had at least one person use it the night before the survey.
  - 92.3% of nets were in use.
  - Only 6.8% were not used for various reasons.
- Pastoralist/nomadic households used nets the least compared to IDPs, permanent residents, and refugees.
- Net use was similar in both urban and rural areas and across different regions.

Use Of Insecticide-Treated Nets

- **Household Net Use:**
  - 87.2% of people slept under a mosquito net the night before the survey.
  - Highest usage was among children under 5 (95.1%).
  - 12.8% did not use nets mainly due to:
    - Not enough nets for everyone (50.4%)
    - No nets available (23.2%)
    - Discomfort using nets (14.8%)
    - Family refusing to use them (6.9%)
- **Pregnant Women:**
  - 22.7% of households had a pregnant woman.
  - More were in urban areas (23.4%) than rural (20.6%).
  - Refugees had the highest share of pregnant women (26.1%), followed by:
    - IDPs (23.6%)
    - Permanent residents (22.3%)
    - Pastoralists (19.4%)

Use Of Insecticide-Treated Nets

- **Pregnant Women Net Use:**
  - 85.8% of pregnant women slept under a net.
  - Highest use among IDPs (89.5%), lowest among nomads (60%) and refugees (63.7%).
- **District Differences:**
  - Lowest net use by pregnant women was seen in Dhusamareb, Dollow, and El-Wak (around 63–65%).
  - Most other districts had over 80% usage.
- **Where Nets Were Used:**
  - 94.8% used nets indoors.
  - Some used them outside (11.3%), especially when resting.
  - Very few used them on farms (0.2%).
  - Nets were mostly used at night.
- **Reasons for Use:**
  - 36.4% used nets to avoid mosquito bites.
  - 28.1% used them to prevent malaria.
  - 34.8% used them for both reasons.

Challenges and Preferences in Using Insecticide-Treated Nets

- **Common Challenges:**
  - 25% of households reported difficulties using nets.
  - Main issues included:
    - Feeling too hot (60.3%)
    - Allergies (32.3%)
    - Poor air circulation (32%)
- **Preferences:**
  - 42% of households had preferences for net color and shape.
    - 73.1% preferred dark-colored nets.
    - 22.4% liked white nets less due to visible stains and frequent washing.
  - 54.6% had shape preferences:
    - 81.3% preferred cone-shaped nets over rectangular ones, which were seen as bulky and hard to use.
- **Health Concerns:**
  - Some people experienced skin or breathing problems after using nets.
  - These effects may be due to poor understanding of how to use the nets properly.

Perceptions of Malaria transmission

- **Understanding Malaria Transmission:**
  - 96.2% knew malaria is caused by mosquito bites.
  - However, 18.8% mistakenly believed it could come from eating/drinking with infected people, and 12.8% thought it came from dirty water.
  - 5.2% reported losing a family member to malaria in the past year (self-reported data).
- **Malaria Prevention Practices:**
  - 84.4% believed mosquito nets are the most effective prevention.
  - 66.9% mentioned keeping surroundings clean.
  - 25.9% used mosquito repellents.
  - 21.4% reported spraying insecticides indoors and outdoors.

Perceptions of Malaria transmission

- **Current Strategies:**
  MoH, UNICEF and partners used various methods like posters (IEC materials), health workers, community events, World Malaria Day, and field visits to raise awareness. These helped increase knowledge about net use.
- **Limitations:**
  The communication mostly reached people at health centers or distribution points, limiting its overall impact.
- **Suggestions for Improvement:**
  People recommended using wider-reaching methods like **TV, radio, songs, and plays** to spread messages more effectively to larger audiences.

Recommendations

- **Target Low Coverage Areas:**
  - Focus LLIN distribution on regions like Bardhere, Kismayo, and Bosaso where net ownership is low.
  - Prioritize newly arrived IDPs fleeing drought and insecurity.
- **Prioritize Underserved Populations:**
  - Increase efforts in pastoralist/nomadic and rural communities with lower net ownership.
  - Improve access for populations facing healthcare and prevention service gaps.

Recommendations

- **Improve District-Level Coverage:**
  - Address low net use in districts like El-Wak, Luuq, Bulaburte, Marka, Wanlaweyn, and Balad.
  - Run targeted awareness campaigns in low-usage areas.
- **Address Household Habits:**
  - Encourage net use both indoors and outdoors, especially during early evenings and daytime rest.
  - Educate that mosquito bites can occur anytime, not just at night.
- **Increase Awareness on Proper Use:**
  - Educate on correct net usage, maintenance, and airing nets before use to avoid discomfort.
  - Raise awareness about preventing heat, allergies, and circulation issues.

Recommendations

- **Design Preferences Should Be Considered:**
  - Promote **conically** shaped nets (preferred by 81.3%).
  - Address preferences for dark-colored nets for durability and visibility.
- **Improve Health Communication:**
  - Expand messaging beyond just LLINs to all malaria interventions.
  - Use diverse channels like TV, radio, plays, and songs to reach wider audiences.
- **Combat Health Misconceptions:**
  - Clarify myths around LLINs causing skin issues or cancer.
  - Launch strong public education and media efforts to promote safe LLIN use.
- **Enhance Communication Strategy:**
  - Broaden beyond campaign days and health centers.
  - Ensure comprehensive, continuous messaging across all malaria prevention efforts.

END