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Since 2005, [over three billion long-lasting insecticidal nets \(LLINs\) have been distributed globally to prevent malaria](#). As a manufacturer, our commitment to quality extends beyond just design and production. We aim to ensure our bed nets deliver optimal malaria prevention for their entire lifespan, promote correct usage, and encourage sustainable disposal.

This requires social behaviour change communication (SBCC) and enhanced community engagement. We can significantly improve the effectiveness and sustainability of malaria prevention efforts worldwide through holistic approaches.

In this interview, [Alexis Kamdjou](#), Vestergaard's Regional Head of Public Health Francophone Africa, and [Olivia Ngou](#), Executive Director and Founder of Impact Santé Afrique (ISA), discuss ways to improve these efforts.

The Challenge of Ensuring Effective Bed Net Usage

Q: Does access to LLINs remain a big problem for many communities in Sub-Saharan Africa?

Ngou: Continuous coverage of LLINs is one of the most cost-effective ways to prevent malaria, which is why the Global Fund has been investing in universal access to bed nets.

In Cameroon, for example, the Global Fund provides at least 80 per cent of the population with a net free of charge. Despite these efforts, several barriers persist, including inadequate funding, difficulties accessing remote populations, and lack of awareness about distribution schedules. Transportation issues further exacerbate shortages in rural areas, leaving many vulnerable groups, such as refugees and internally displaced persons, at high risk for malaria. This underscores the urgent need for more comprehensive and coordinated efforts to improve LLIN accessibility across the region.

Climate change is making the job harder. Over the last two rainy seasons, many houses have

been destroyed, and bed nets have been lost or damaged. We need to find a way to replenish them.

Addressing Barriers to LLIN Access in Sub-Saharan Africa

Q: Bed nets are designed to provide effective protection for three years. How do we ensure people use them and care for them in a way that supports their long-term efficacy, thereby ensuring they remain protected?

Ngou: Inadequate communication and awareness around net usage means people may not use them for the intended duration. For example, if nets are torn or dirty, people may just throw them away. However, holes can be sewn, and dirty nets can be washed with mild soap - no chemicals, bleach or harsh substances - while retaining their insecticidal properties for at least twenty washes over a three-year lifespan. Proper net care is crucial for a net's longevity and to ensure continued protection against malaria.

A recent government survey in Cameroon showed that around 40 per cent of the population with nets are not using them, likely mirroring trends in other regions. More research is needed to understand why, but previous studies suggest reasons include uncertainty about usage, doubts about effectiveness, or discomfort from feeling too hot.

We need improved education and awareness on bed net usage, particularly among young people from primary school to high school. Young people can influence their families and create a generation that knows how to use nets properly, which is easier than changing adult behaviours.

Enhanced community outreach programs are also necessary to educate people about the importance of using LLINs consistently and correctly. This should include training on proper installation, usage, and maintenance of the nets.

Kamdjou: Vestergaard is conducting research to understand the social and behavioural factors influencing bed net use, including why people use them or don't, how they care for them, how long they use them and the problems they encounter.

Once we understand this, we can develop targeted communications and collaborate with national malaria control programs (NMCPs), civil society organisations and community health leaders to effectively reach end users.

Understanding Social and Behavioural Factors in Bed Net Usage

Q: Is there enough information about bed nets' end of life?

Ngou: The communication around what to do with expired nets is unclear so communities remain confused. There's an urgent need to develop better guidelines on what to do with expired nets.

Kamdjou: Recent research in Nigeria showed that around 50 per cent of expired nets remain in households. You can use them in positive ways, for example, to protect crops, but we don't want the net thrown away in the city or in the river or used for fishing because the insecticide destroys ecosystems.

Role of Community Health Leaders in Bed Net Management

Q: How can community health leaders increase the usage and correct disposal of nets?

Ngou: We need to raise awareness and deliver the right messages in the local language on the importance of using nets every night.

It's about putting the community at the centre of solutions rather than imposing foreign ideas on how communities should behave. This means investing in community-led interventions, including programmes that integrate net care education into broader health and hygiene initiatives. When communities understand and take ownership, progress is smoother, as seen during COVID-19.

Community-led monitoring involving civil society organisations can ensure nets are being used and cared for properly and can also support the most vulnerable, including the elderly or disabled, in hanging their nets properly.

Communicating the Importance of Bed Net Use

Kamdjou: Although mass distribution campaigns occur every three years, we must engage with communities more frequently - ideally every three months - to remind them why and how to use, maintain, repair, wash and ultimately dispose of bed nets.

When AIDS was still at a higher level of preoccupation, many African countries launched aggressive communication campaigns on HIV prevention. We've never had the same level of aggressive communication on malaria. We need a stronger, more effective programme to educate people.

The widespread use of mobile phones and WhatsApp presents new opportunities for effectively delivering these messages. The approach must be tailored to each country, involving collaboration with international and local NGOs, civil society organisations, NMCPs, and experts in social and behavioural communication. However, effective campaigns require funding, which could prove a challenge.

Environmental Responsibility in Bed Net Disposal

Q: Whose responsibility is the environmentally friendly disposal of bed

nets?

Kamdjou: The malaria community as a whole is taking this issue of waste very seriously and at Vestergaard we want to ensure nets are disposed of in a way that doesn't hurt the environment.

An all-inclusive approach involving all manufacturers and international donors is needed, with countries playing a central role in coordinating efforts.

Recycling is the ideal option, and one Vestergaard has explored. However, collecting and shipping nets for recycling is costly and resource-intensive.

But with the right approach, technology and cost management strategies, I believe recycling is possible.

Vestergaard's Efforts for Sustainable Bed Net Practices

Q: What else is Vestergaard doing to ensure durability and appropriate end-of-life care for bed nets?

Kamdjou: Vestergaard is researching why people stop using nets and what they do with them afterwards. This will help us improve net design to increase usage rates and guide waste management initiatives.

We are also considering manufacturing in Africa. If the right technology is available, local production will facilitate recycling because transporting nets within Africa is more cost-effective.