As part of the malaria community, Vestergaard shares the concern about increasing malaria cases and has actively been working with partners, the WHO and others, for many years to address this challenge.

An article recently published by Bloomberg sought to identify the causes behind rising rates of malaria in PNG. Despite evidence of a number of factors potentially contributing to the increase in cases, such as changes in mosquito biting behaviour, species composition or transmission dynamics (Cleary, Hetzel, Clements, 2022), the article chose to focus solely on Long Lasting Insecticide Nets (LLINs) and to draw conclusions about their role.

But any attempt to directly link an increase in malaria cases in PNG with the performance of bed nets produced by Vestergaard is not supported by scientific research. Our focus has always been to ensure our nets fulfil WHO requirements for quality, safety, and efficacy. We have always done this according to the standards in place. We take our responsibility as a leading player in the malaria ecosystem very seriously, and we are ready to continue contributing to scientific discussions with players in our ecosystem on how standards should evolve in the future to maximise the chances of eliminating malaria.

At Vestergaard, we continue to innovate to develop new and effective LLINs that provide the highest levels of protection to those who most need it. Given the increasing threat of insecticide resistance, we have continued to innovate over the past 12 years, launching PermaNet 3.0 and PermaNet Dual, both of which have demonstrated additional public health value. We are supportive of the market shifting towards these newer bed nets.

Why did Vestergaard change the binder on its nets in 2012?

We made changes to the coating that binds insecticide to our nets due to the industry shifting away from binders containing PFAS, also known as ‘forever chemicals’, and the discontinuation of those binders. All relevant tests were done at the time to ensure compliance with WHO standards.

Is the new formulation less effective than the previous one?

PermaNet 2.0 LLINs comply with the WHO's standard for bioefficacy. This is the only accepted standard to judge the efficacy of LLINs.

The conclusions by the researchers in PNG cited as the main support for the Bloomberg article are not aligned with the majority of scientific evidence that has examined the bioefficacy of PermaNet 2.0. Multiple empirical studies *(Abílio et al., 2015; Agossa et al., 2014; Allossogbe et al., 2017; Hughes et al., 2022; Kweka et al., 2017, Mechan et al., 2022, Ngongang-Yipmo et al., 2022, Okia et al., 2013, Omondi et al., 2017),* not included in the PNG study, demonstrate that new PermaNet 2.0 LLINs met WHO criteria using cone tests only. Suggestions that PermaNet 2.0 LLINs are ineffective or substandard are, therefore, false and are not supported by the facts.

Did cost considerations drive the change in formulation?

No. Vestergaard had no choice at the time but to evolve the PermaNet 2.0 formulation due to the anticipated discontinuation of the binder. The solution chosen was the best viable alternative in terms of efficacy.

The priority in all of our decision-making around product management is to ensure the quality, safety and efficacy of our bed nets in compliance with WHO standards and at the lowest cost to ensure maximum coverage of nets to the beneficiaries. Any suggestion of other motives is contrary to our core beliefs, our mission and our operations.

Why did Vestergaard not share information about the changes with the WHO in 2012?

While testing done at the time ensured compliance with WHO standards, no process existed before 2017 to report changes to products to the WHO. We fulfilled all requirements when the WHO Prequalification established a clear procedure for the declaration of formulation and manufacturing process in 2017.

What are other factors that could contribute to increases in malaria rates in PNG?

Malaria is a complex disease, and rates of transmission are influenced by multiple factors, including socio-economic development, security, LLIN type and coverage, LLIN usage, mosquito behaviour and climate change, amongst others. We do not have a definitive answer to why rates have increased in PNG while they have decreased in other areas using the same nets. For example, in the Indian state of Odisha, which is nearly five times the size of PNG, there was a 90% reduction in malaria cases two years after the distribution of PermaNet 2.0.

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