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3 **TITLE:** Misuse of long-lasting insecticidal nets in Akwa Ibom state, South-South
4 Nigeria

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32 **TITLE:** Misuse of long-lasting insecticidal nets in Akwa Ibom state, South-South
33 Nigeria

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35 **To the Editors,**

36 The Global incidence of malaria is estimated to be 250 million clinical cases annually
37 leading to approximately 1 million deaths mostly of children under 5 years of age [1].

38 The commonest specie of plasmodium in Nigeria is plasmodium falciparum which
39 accounts for 98% of malaria infections in Nigeria [2]. Nigeria accounts for up to 25
40 percent of the global malaria cases and deaths [3] and malaria is one of the common
41 causes of hospital attendance in all age groups [2] 2 and also one of the four
42 commonest causes of childhood mortality in the country [2]. Every year, the nation
43 loses several billions of naira, derived from cost of malaria treatment and
44 absenteeism from work, schools and farms [2].

45 As part of strategies to reduce the burden of malaria globally, the use of the long
46 lasting insecticidal nets (LLIN) has been strongly advocated. In sub-Saharan Africa,
47 the estimated proportion of people with access to a LLIN in their household was 56%
48 in 2014 and 67% in 2015 [4]. However, the estimated proportion sleeping inside an
49 LLIN was 46% in 2014 and 55% in 2015 [4]. The Nigeria Malaria indicator survey
50 2015 showed that 71 percent of households in Nigeria have at least one mosquito
51 net and over 70% of these nets were acquired during net distribution campaigns [3].

52 LLINs are an important part of the roll back malaria strategy and are reported to be
53 the most efficacious of all currently feasible interventions for malaria control in Africa.

54 Insecticide treated nets and long lasting insecticidal nets have protective effect to the
55 individual user, as well as a community-wide effect because the occupied nets act
56 like baited traps for mosquitoes [5]. This reduces the likelihood of malaria infection
57 and the population of infective mosquitos [5]. Optimal use of ITNs to prevent malaria
58 in a community depends on vector behavior, mass distribution,
59 knowledge/willingness of people to use the nets and misuse of the nets [1]. Reports
60 of misuse of LLIN and ITNs range from use as door blinds, window curtains,
61 blankets, ceiling covers, tablecloths, and even as decorative dressing for weddings
62 and burial ceremonies [6]. In Akwa Ibom state in South – South Nigeria, a curious
63 and incredible misuse of LLINs is gradually now becoming common practice.

64 Individuals prefer to use these nets (Figure 1 & 2) to protect crops in their farms
65 (planted “Water leaf” -*Talinum fruticosum*) from pests particularly Insects and
66 domestic animals. This is particularly rife in the suburbs and rural areas where
67 women plant these crops in their backyards close to the home and cover them with
68 LLINs. Cultivation of plants in a controlled environment is better done in a “Green
69 House”. However, the technology is not common in Nigeria and the cost is way
70 beyond the reach of the average rural dweller in Nigeria.

71 It has also been reported that some people use their LLINs to catch fish; these nets
72 are considered as cheap alternative to regular fishing nets [7]. Others cover ant hills
73 with the nets in order to catch white ants; a local delicacy eaten as a mid-day snack
74 in some parts of Africa [7]. This gross misuse of these nets has the potential to
75 create donor apathy and end the much desired support for any intervention that is
76 vital to malaria control and must be strongly discouraged. Efforts must be intensified
77 to disseminate information on the many advantages of the proper use of the LLINs.

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79 **CONFLICT OF INTEREST**

80 NOT GIVEN

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82 **AUTHOR’S CONTRIBUTIONS**

83 NOT GIVEN

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114 FIGURE LEGENDS

115
116 Figure 1: Long lasting insecticidal nets used in the farm to protect crops

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118 Figure 2: Long lasting insecticidal nets used in the farm

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128 **FIGURES**



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131 Figure 1: Long lasting insecticidal nets used in the farm to protect crops

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135 Figure 2: Long lasting insecticidal nets used in the farm