

- Specific sensibilization could be implement to improve adherence to malaria control interventions.

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### **Malaria asymptomatic carriage in the Sahelian region: the challenge associated to young adults**

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#### **Background:**

Mali and Senegal have made important efforts to control malaria. After a period of decline, the number of cases has remained stable for several years. Asymptomatic carriage acting as a reservoir could explain malaria persistence despite malaria control. Mass drug administration (MDA) is a candidate intervention that could help to accelerate the decreasing of malaria transmission if favourable epidemiologic context and good adherence are met. We aimed to update asymptomatic reservoir description along a Sahelian ecological gradient and study MDA acceptability.

#### **Methods:**

We conducted an open cohort in 8 villages in Mali and Senegal including all household members sampled aged >6 months. We measured *P. falciparum* infections prevalence by qPCR in 4 surveys: 2 in dry season 2021, 1 in rainy season 2021 and 1 in dry season 2022. We measured prospective acceptability of MDA in cohort aged  $\geq 15$  years in Senegal by questionnaire. We explored risk factors associated to asymptomatic infections and acceptability score with multilevel logistic and linear models.

#### **Results:**

We included 168 households and 1428 participants in at least 1 survey. In preliminary results, prevalence of *P. falciparum* infections was 11% in dry season 2021 in Senegal, 20% in central Mali and 60% in Northern Mali. Young adults between 15 to 24 years old were more likely to carry asymptomatic infections in dry season compared to children <5 years old (OR = 5.74 [2.99;11.04]). MDA presented a good acceptability with a mean score of 3.5 (score between -7 and 7). Young adults had lower acceptability compared to older participants ( $\beta = -1.07$  [-1.82,-0.32]).

#### **Conclusions:**

Young adults were important asymptomatic carriers in Senegal and Mali but were less likely to accept to participate in MDA.

#### **Key messages:**

- Young adults represent a public health challenge that need to be address to reach malaria elimination.