

# Changing Transmission Dynamics among Migrant, Indigenous and Mining Populations in a Malaria Hotspot in Northern Brazil: 2016 to 2020

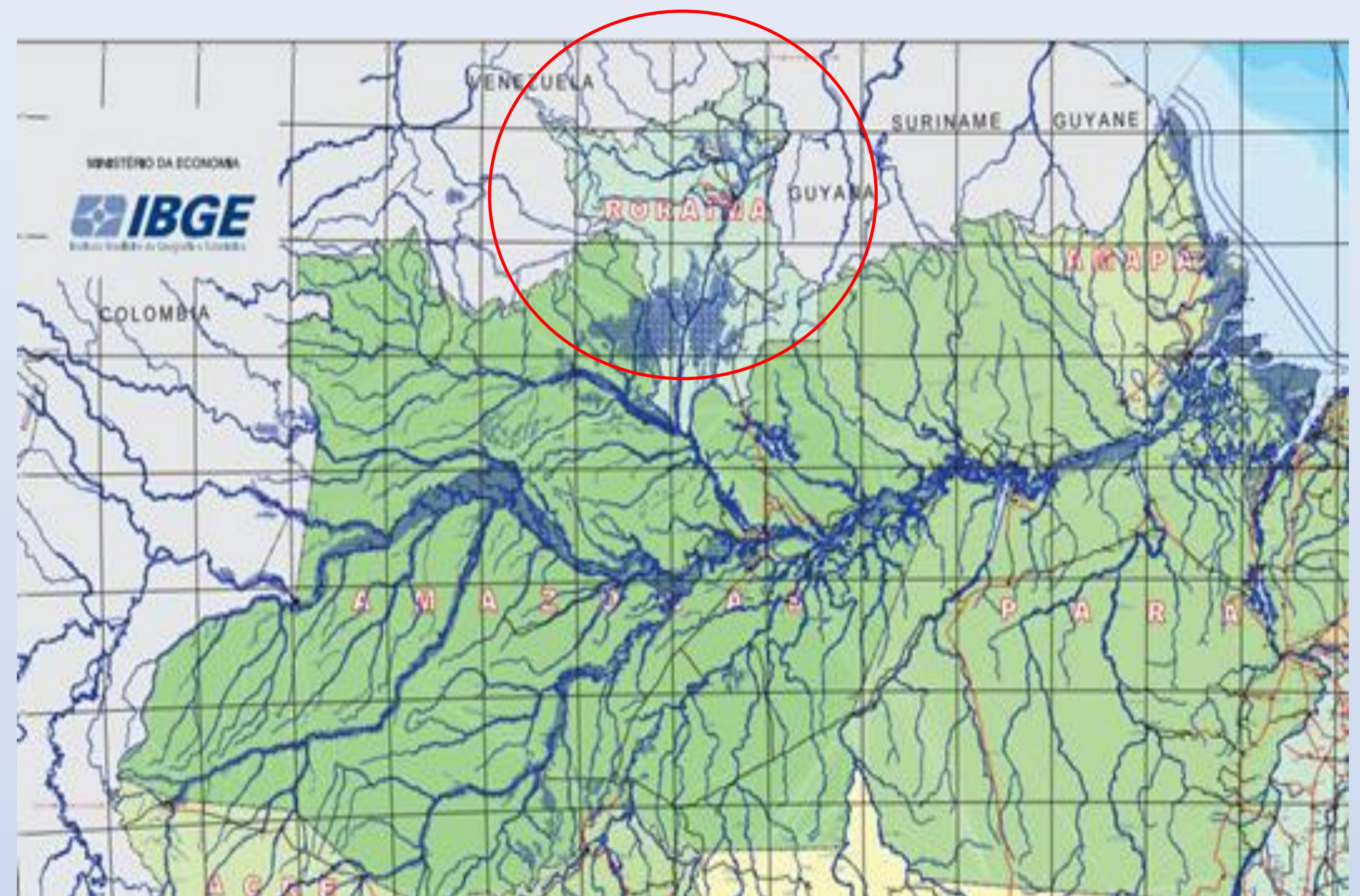
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## Background

- Roraima state is the northernmost state in Brazil, border with Venezuela and Guyana
- Migration of Venezuelans to and from neighbouring countries and the increase in informal mining in Roraima state, pose a serious threat to the broader region, especially to migrant, indigenous and mining populations
- These changes are jeopardizing malaria elimination efforts.



**This study describes changes in the epidemiological profile of malaria in Roraima State related to time, place and populations at risk from 2016 to 2020.**

## •Methods:

- Data source: De-identified malaria surveillance data obtained from Brazil's Malaria Epidemiological Surveillance System from 2016 to 2020.
- Pearson's chi-square tested for differences between imported and autochthonous cases.
- Multivariable logistic regression was used to identify risk factors for imported versus autochthonous cases by demographic characteristics.

## Results and Conclusions

- Odds of being an imported case were higher for *Plasmodium falciparum* cases (AOR=2.08).
- The proportion of *P. falciparum* cases increased, from 6.24% in 2019 to 18.50% in 2020.
- Over the 5-year period, the odds of being an imported case among miners were about nine times higher than the general population (AOR=8.99).
- The proportion of total malaria cases that were among indigenous people increased from 33.09% in 2016 to 54.83% in 2020.
- Indigenous children had a higher burden of malaria, with over 40% of reported cases in children 0 to 9 years old, compared to 8% in non-indigenous children 0 to 9 years old.

- **Malaria cases have increased among indigenous people and miners, and also the proportion of *P. falciparum* cases has increased**
- **Elimination efforts require understanding of these risk factors to tailor interventions appropriately.**
- **Malaria remains a serious threat in Roraima state, especially among high-risk populations, such as miners, migrants, and indigenous people.**