



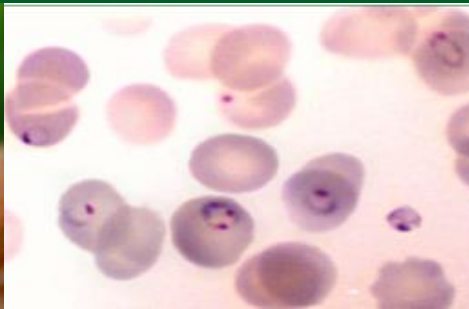
health

Department:  
Health  
**REPUBLIC OF SOUTH AFRICA**

# Role of Doxycycline for malaria prophylaxis in South Africa

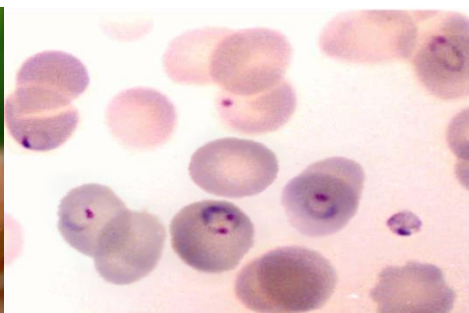
Karen I Barnes, University of Cape Town

*NDOH Webinar:  
Chemoprophylaxis Reimagined:  
The Role of Doxycycline in Malaria Elimination  
28 August 2025*



# OUTLINE

- Objectives & Rationale
- Target population
- Chemoprophylaxis options
- Current costs
- Demand projections
- DISCUSSION



# Objectives

- To reduce malaria morbidity and mortality
- To advance malaria elimination in South Africa.

# Rationale

- The **World Health Organization's Framework for Malaria Elimination (2017)** recommends the use of chemoprophylaxis in migrant workers and travellers exposed to malaria in order to advance malaria elimination:

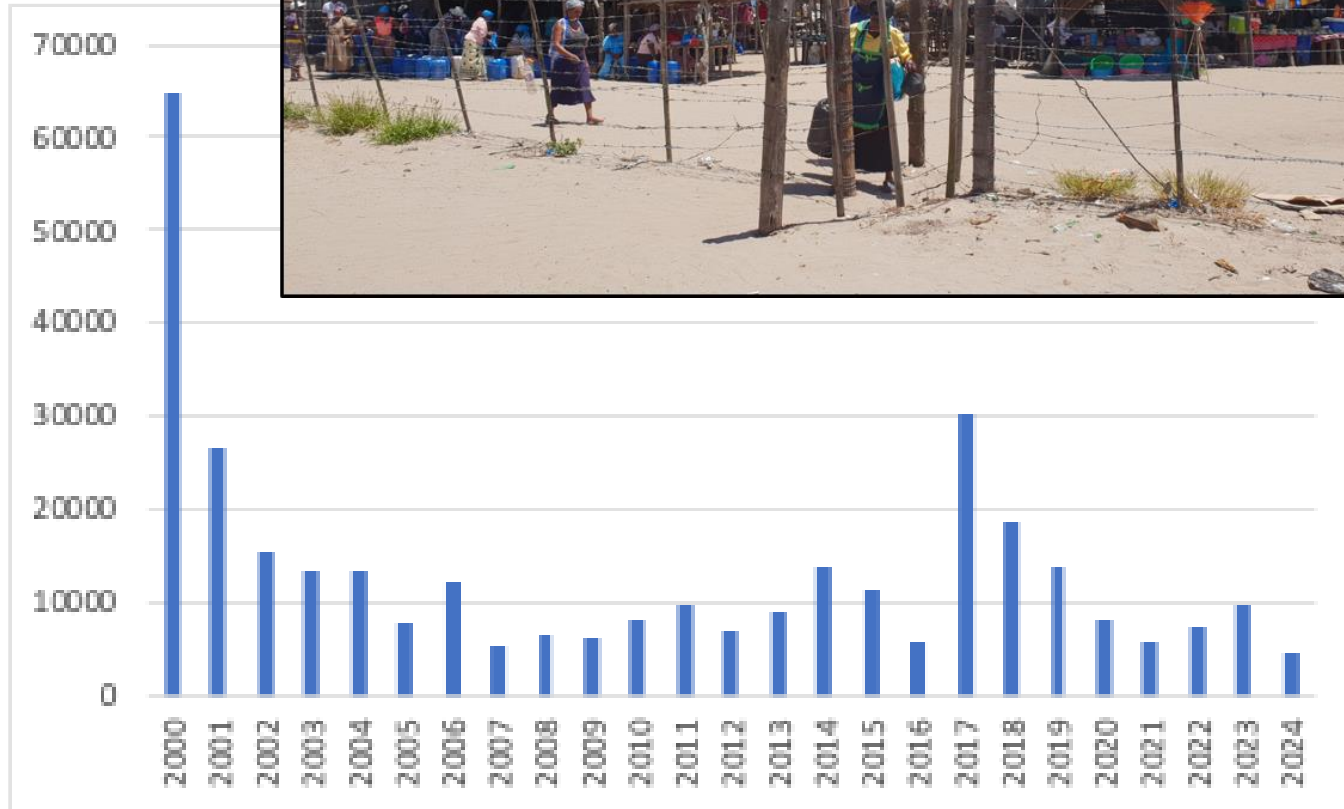
*“Prophylaxis should be distributed for free to local people travelling to malaria endemic places”*

- **The majority of malaria cases in South Africa are imported from other countries.** While wealthier travellers can procure chemoprophylaxis in the private sector, this is not an option for most of the mobile and migrant population that are the major parasite reservoir in South Africa and depend on public sector health facilities.
- Including malaria chemoprophylaxis in the **PHC / Adult National Essential Medicines List** is a valuable tool for reducing malaria morbidity and mortality and advancing malaria elimination.



# Progress towards elimination

## Malaria cases and deaths notified in SA (2000–2024)



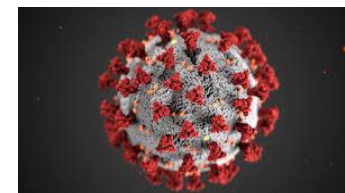
**2016** **Drought year** which resulted in very few cases

**2017** **Perfect malaria ecological conditions** including record flooding from Cyclone Dineo, and warmer winter periods

**2018** **Mobile clinic teams** near borders with high-importation to test *and treat* for malaria

**2019** **Conditional grant** disbursed

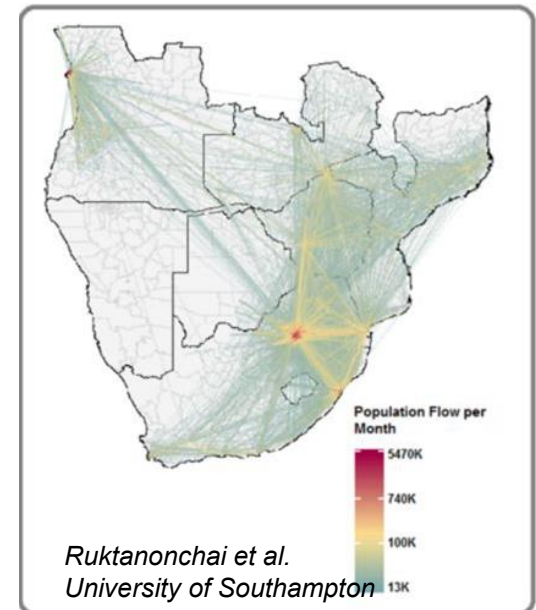
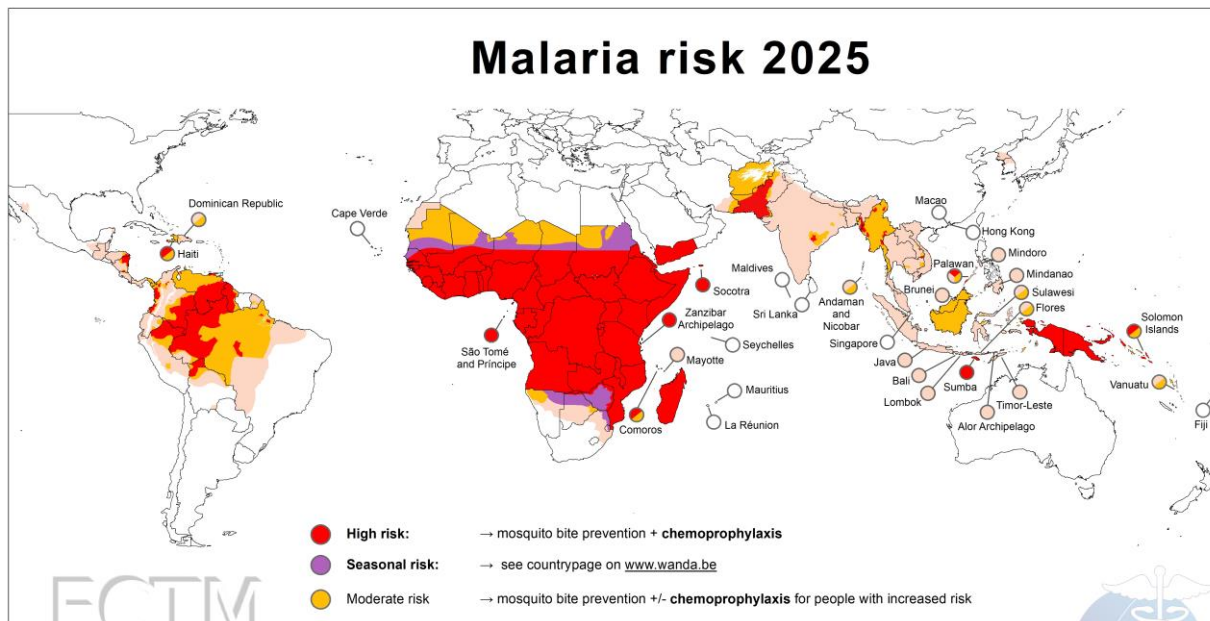
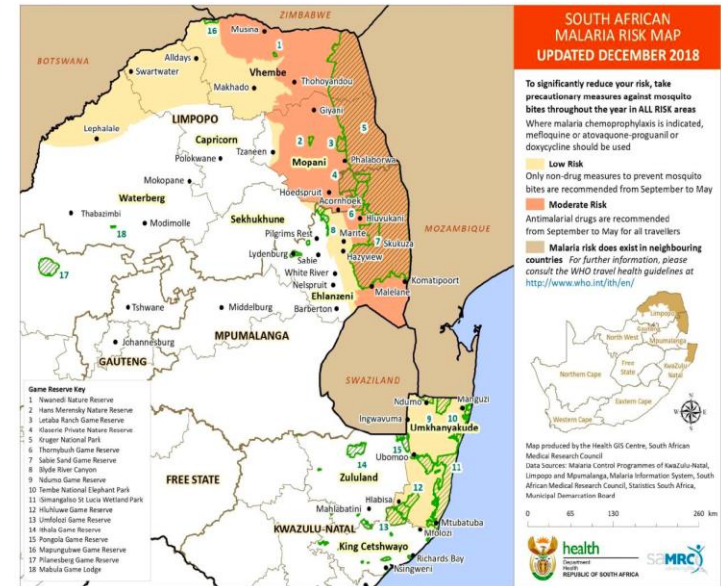
**2020** **COVID pandemic**, lockdown and border closures till **2022**



# Target population for chemoprophylaxis

1. South African residents (including mobile and migrant populations regularly staying in South Africa) travelling to and from higher risk malaria countries.
2. South African residents in non-endemic areas (e.g. Gauteng) travelling to outbreak/moderate risk areas in South Africa in the malaria season (September to May).

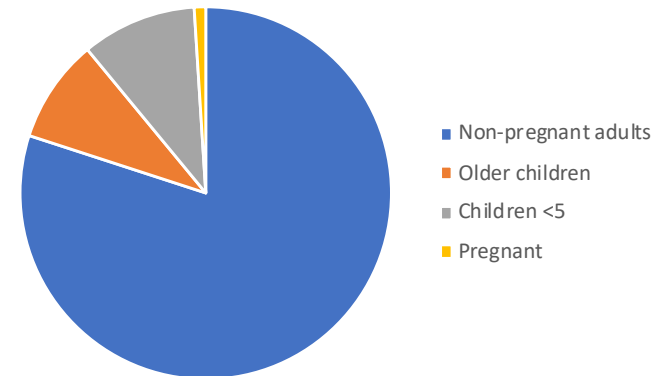
NOTE: Chemoprophylaxis is not recommended for permanent residents in moderate risk areas.



# Target population 2

The burden of malaria in higher intensity transmission areas in Africa is primarily among young children and pregnant women.

However, this is not the case in South Africa, where most notified malaria cases are adults (~80%) and male (~70%), with few children under 5 (~10%) and very few pregnant women (~1%).



# Target population 3

## Malaria cases notified by source of infection and endemic province

- Priority areas for **advancing malaria** elimination (i.e. no local transmission) in ZA:
  1. KwaZulu Natal (~1% cases local)
  2. Mpumalanga (~10% cases local)
  3. Limpopo (~70% cases local)
- Priority areas for **reducing morbidity and mortality**: non-endemic areas e.g. Gauteng ~40% of all ZA malaria cases with ~4% case fatality rate vs WHO target 0.5%.
- Priority areas for preventing introduction of **drug-resistant malaria** include Namibia, Zambia, Uganda, Tanzania, Rwanda, Kenya, Eritrea



# Thank you





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# **SOUTH AFRICAN GUIDELINES FOR THE PREVENTION OF MALARIA**

Updated January 2019

# Chemoprophylaxis options

## ADRs & precautions

	Mefloquine	Doxycycline	Atovaquone-proguanil
Most common ADRs	Nausea Strange dreams Dizziness Mood changes Insomnia Headache Diarrhoea	Photosensitivity Oesophageal ulceration GIT symptoms Candida super-infections (GIT/vaginal)	Well tolerated Headache Abdominal pain
Special precautions	Avoid if requires fine motor coordination	Sunscreen Take with a full glass of water Don't lie down for 1 hr after dose	Take with water / food for better absorption

# Chemoprophylaxis options

Comorbidities	Mefloquine	Doxycycline	Atovaquone-proguanil
Pregnancy	Use	CI	CI
Breast-feeding	Use	?Use (AAP, WHO if short trip)	?Use (CDC if >5kg baby)
Children	Use >5kg	>8 years	>11kgs
HIV +ve	Potential DI	Use	Potential DI
Epilepsy	CI	Use (some DI)	Use
Psychiatric conditions	CI, even if only as a medical history	Use	Use
Renal / Hepatic impairment	CI in severe hepatic impairment	Use	CI (GFR<30ml/min)
Diabetics (monitor glucose levels)	Use	↑ insulin-related hypoglycaemia	Use