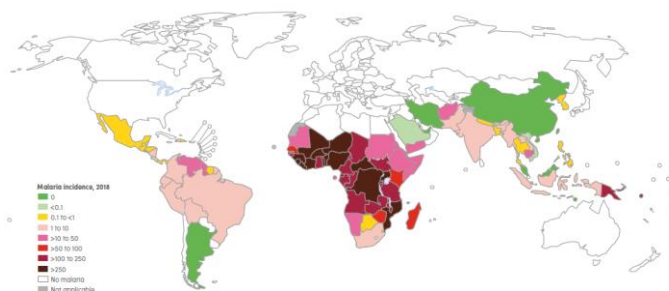


Why do we need increased attention to malaria among refugee populations?

- Malaria is a major cause of morbidity and mortality globally, including among refugee populations. In 2020, an estimated 241 million cases of malaria occurred worldwide with an estimated 627,000 deaths (WHO, 2020).
- Climate change will impact on malaria transmission, increased temperatures and rainfall may result in transmission in previously malaria-free zones in higher altitudes. Likewise, higher temperatures in lower altitudes with ongoing transmission may see a change in the growth cycle of the parasite in the mosquito and impact on the burden of disease.
- Women of reproductive age and children constitute the majority of refugee populations; pregnant women and children are at greatest risk for severe malaria and death due to low immunity against malaria.
- Malaria outbreaks among refugees can occur where there is low previous malaria exposure and hence low immunity. Moreover, refugee camps are often sited on marginal lands that promote breeding sites for malaria vectors.
- Refugee shelter conditions may make them more vulnerable to malaria, particularly in the early stages of displacement and if they reside in poorly or hastily constructed shelters.
- Poor health and nutritional status, especially during the first phase of displacement, may increase the susceptibility to infection and/or vulnerability to complications of malaria.
- Access to diagnosis, treatment and preventive measures is likely to be interrupted in refugee hosting areas especially during the early emergency phase where the existing health infrastructure may be overwhelmed by the additional caseload. Access may be further compromised due to costs or insufficient inclusion in national malaria programmes. Moreover, data from 20 countries reporting in the UNHCR health information system show persistent high morbidity and mortality from malaria, highlighting the need to further intensify malaria control programmes.

MALARIA MORBIDITY AND MORTALITY

- In 2021, malaria was the second most common cause of morbidity among refugees in the 20 countries reporting through the health information system. The top 5 morbidities were:
 - Upper Respiratory tract infections (22.7%)
 - Malaria (18.7%)
 - Lower respiratory tract infections (7.5%)
 - NCDs (5.4%)
 - Watery diarrhoea (4.9%)
- In 2019 malaria was the second most common cause of death constituting (8.3%) of mortality amongst refugees (in the 20 HIS reporting countries in 2019).



Source: WHO, World Malaria Report 2019

Purpose of this guidance note and considerations

- Offers a practical and short reference for UNHCR Public Health Officers and partners on priority activities for malaria prevention and control in refugee settings and surrounding communities.
- Takes into consideration other UNHCR guidance documents and more recent experiences and country assessments.
- Recognizes that the [Malaria Control in Humanitarian Emergencies: an Inter-Agency Field Handbook](#) (2013) is undergoing revision. This note will be updated as needed.

The WHO Global Technical Strategy for Malaria (2016-2030) sets a goal to reduce malaria mortality and incidence rates by at least 90% by 2030. UNHCR will contribute to this goal in respective refugee settings in supporting countries to achieve the national targets by strengthening integrated malaria control programmes through a) enhanced access to malaria prevention, diagnosis and treatment, b) sustainable solutions to reduce transmissions and c) strengthened surveillance.

Strategic approach

The strategic approach is guided by three major pillars of the [WHO Global Technical Strategy for Malaria 2016-2030](#) with consideration of refugee contexts. The implementation of programmes is context-specific and should be considered in conjunction with national malaria prevention and control programmes and policies.

Pillar I: Ensure refugees' access to malaria prevention, diagnosis and treatment

Key activities: vector control, expand preventive approaches, diagnostic testing, case management, community engagement. Malaria control activities should be carried out in consultation with the National Malaria Control Programme/ Ministry of Health or WHO.

a) Vector Control



Emergency phase

- Include Insecticide-Treated Nets (ITN)¹ (1 for every 2 persons) as part of blanket distribution as a key priority intervention. Select the type of ITNs (pyrethroid or pyrethroid-PBO nets) in consultation with MoH, taking into consideration potential resistance to insecticides. ITNs must have WHO prequalification status and are available through UNHCR stockpiles.
- Where there is an imminent risk of a malaria outbreak, conduct Indoor Residual Spraying (IRS). This applies to settings where shelters are not suitable for hanging ITN due to lack of space but have sprayable surfaces.

Stable phase, as soon as possible

- Timely mass distribution of ITNs (1 for every 2 persons) and replacement every 2 to 3 years (or earlier if damaged or torn).
- ITN distribution campaigns should be accompanied by social behaviour change communication (SBCC) approaches to encourage appropriate usage and maintenance, including pictorial information on how to hang and maintain nets.
- Indoor residual spraying (IRS) where appropriate:
 - IRS is carried out in zones with permanent structures, including surrounding host communities. Seek Ministry of Health and entomological expertise before carrying out IRS to understand malaria vector behaviour and potential insecticide resistance.
 - Frequency of IRS per year is determined by seasonality of malaria, the longevity of the insecticide chosen and the findings of insecticide resistance studies. Longevity of an IRS round is also determined by the type of sprayable surface, i.e., longest on brick walls or plastic sheeting, less on mud or foliage. IRS must be carried out before the onset of the expected peak season for malaria.
 - WHO recommends against combining ITNs and IRS. Priority is to be given to delivering either ITNs or IRS at optimal coverage and to a high standard. A combination of both interventions is situation dependent and may be considered for resistance prevention, mitigation or management should sufficient resources be available.
- Larval source management or other environmental modifications (context-specific): Larviciding may be considered as complementary in areas where optimal ITN or IRS coverage has been achieved or cannot be carried out. It is most effective in areas where larval habitats are few, fixed and findable ([See WHO Larval Source Management Operational Manual](#)).



¹ The term ITN covers Pyrethroid-only nets which should ideally be Long-Lasting Insecticidal Nets (LLIN) and Pyrethroid-PBO nets

b) Other preventive approaches

Emergency phase

- Prioritize prompt and effective diagnosis and treatment of all clinical malaria episodes to limit avoidable malaria deaths in mobile and static health facilities.
- Mass Drug Administration (MDA) in specific contexts (see [here](#))
 - when the health system is overwhelmed and unable to serve the affected communities OR
 - for epidemic control as part of the initial response, along with the urgent introduction of other interventions.

Stable phase

- Intermittent preventive treatment of malaria in pregnancy (IPTp) with sulfadoxine–pyrimethamine (SP) for all pregnant women in areas with moderate to high malaria transmission.
- Seasonal malaria chemoprevention (SMC) for children aged 3-59 months where applicable (e.g., in areas with highly seasonal malaria transmission and as part of the national programme).
- Intermittent preventive treatment of malaria in infants (IPTi) for infants (<12 months of age) in areas with moderate to high malaria transmission where SP is still effective.



Vaccination

- Currently one vaccine (RTS,S/AS01) is approved for use by WHO for the prevention of *P. falciparum* malaria in children (>5 months of age) living in regions with moderate to high malaria transmission, in line with national guidelines.
- Advocate for the inclusion of refugees in malaria vaccination programmes where it is part of national programmes.

ATTENTION!

- For some infectious diseases, such as kala azar, viral haemorrhagic fever and others, diagnosis and management may be delayed if fevers are initially commonly treated as malaria. Attention is needed to follow appropriate testing and treatment protocols.
- The malaria parasite can cause anaemia. A high prevalence of anaemia identified in malaria endemic areas/ epidemic season could be due to frequent malaria infections (consider this during analysis and interpretation of SENS survey findings).
- Continued access to prevention and treatment of malaria during COVID-19 is critical, adjustments to service implementation may be required in line with national guidelines and the epidemiological situation. Additional guidance is available [here](#).

- Malaria vaccine should be provided as part of a comprehensive malaria control strategy, all malaria control interventions provide partial protection and the highest impact is achieved when multiple interventions are used concurrently.

c) Diagnostic testing

Emergency phase

- Provision of supplies and laboratory support for confirmatory tests such as microscopy and rapid diagnostic malaria tests.



Stable phase

- Increase malaria diagnostic capacity through expanding rapid diagnostic testing (RDT) to community health workers (CHWs) in line with the national strategy.
- Identify a laboratory that can provide quality control, determine parasite species and density.

d) Case management

Emergency phase

- All patients with suspected malaria should be treated on the basis of a confirmed diagnosis by microscopy examination or RDT to reduce unnecessary treatment with antimalarial drugs (contributing to drug resistance) and improve the diagnosis of other febrile illnesses.
- Provide quality assured treatment according to the national treatment protocol.
- Manage severe cases through necessary referrals
- In the stable phase, evaluate capacity and possibility of introducing integrated community case management where this is part of the national programme.
- Ensure ongoing capacity strengthening of health staff at different level.

Pillar II: Planning, capacity building and sustainable solutions for reducing transmission

Key activities: situational assessment, programme planning and allocation of resources, community participation and capacity building for both refugees and health workers

a) Situational assessment

- Malaria should be integrated into the health assessment at the onset of an emergency and updated regularly (context-specific).
- Consider the incidence in the host community and, in acute emergencies, use country of origin data for refugees.
- Be alert for a malaria epidemic, when the incidence of cases (other than seasonal increases) in an area rises rapidly and markedly above its usual level or when infections occur in an area where they were not previously present.
- Assess the health workforce, infrastructure, supplies and capacity of local health services to manage malaria (see [WHO Service Availability and Readiness Assessment tool with a section on malaria](#))
- Where indicated, review/develop a malaria epidemic preparedness and response plan.



b) Programme planning and allocation of resources

- Align activities with national plans for malaria control.
- Support Programme in prioritizing malaria activities in Partnership Agreements/ LoUs where relevant.



c) Community participation, IEC and behaviour change communication

- Provide IEC materials in refugee language/s.
- Consider refugee social, cultural and behavioral factors in developing the communication strategy.
- Continuous community engagement and sensitization on retention and use of ITNs and on IRS campaigns where relevant.
- Use multiple communication channels including the community health workforce, community leaders, women- and refugee-led organisations and multimedia interventions to conduct social mobilisation and behaviour change communication as part of all malaria control interventions.

d) Capacity building

- Develop annual capacity building plan.
- Train and provide supportive supervision to health staff to adhere to diagnosis and treatment protocols.
- Train CHWs on malaria and, where applicable, on integrated community case management.
- Include maternal and child health, laboratory and pharmacy teams in capacity building initiatives.



Pillar III: Ensure routine surveillance, evidence-based decision-making, and integration of activities within the national programme

Key activities: surveillance, monitoring, advocacy, inclusion and integration

a) Surveillance, monitoring and evaluation

- Monitor trends including malaria deaths, proportion of consultations due to malaria, RDT positivity rate and clusters of cases using the Integrated Refugee Health Information System.
- Develop thresholds to provide early warning of an outbreak based on data monitored.

- Monitor effectiveness of malaria control interventions including access to services, ITN usage and effectiveness of detection and treatment.
- Include malaria progress in monthly health coordination meetings and annual implementation review.
- Outcome and impacts are measured through the indicator results listed below.



Indicator	
Routine monitoring through iRHIS and/ or national systems	Baseline/Target
Number of malaria deaths (disaggregated under 5s and crude)	
Proportional mortality due to malaria (# of deaths due to malaria/ Total # of deaths X 100)	
Malaria suspected (disaggregated under 5s/ crude)	
Malaria confirmed (disaggregated under 5s/ crude)	
Malaria test slide positivity rate (Number of positive slides/Total slides examined)	
Malaria RDT positivity rate (Number of positive RDTs/Total RDTs)	
Periodic monitoring through SENS or other surveys (annually)	
Average number of ITNs per household	
% of HH with at least one ITN	
% of children under 5 who slept under an ITN the night preceding the survey	
% of pregnant women who slept under an ITN the night preceding the survey	
% of targeted HH sprayed in the last 12 months	

b) Advocacy

- Promote inclusion of refugees in national and sub-regional (cross-border) policies, plans and strategies.
- Ensure refugees have non-discriminatory access to existing malaria-related services, including the provision of treatment and testing.
- Promote and advocate for inclusion of refugees into national funding streams for malaria; particularly the Global Fund and the President’s Malaria Initiative, including UN agency support.



- Regular communication and information sharing with Ministry of Health /sub-national health authorities on inclusion of refugees in National Malaria Control Programmes and strategies including in malaria medicine supplies, testing materials, IRS campaigns, ITN requirements and funding proposals.
- All efforts should be made to include refugee camps/settlements in the national ITN/IRS plans.
- Close planning and collaboration with programme, field staff, partners and refugees themselves is crucial.



c) Inclusion and Integration

- The malaria prevention and control strategy for refugee population should be guided by the national strategy and should include host communities.

Further Reading

- [WHO Global Technical Strategy for Malaria 2016 – 2030, 2021 update](#)
- [WHO Guidelines for malaria \(July 2021\)](#)
- [UNHCR Global Strategy for Public Health 2021-2025](#)
- [WHO World Malaria report 2020](#)
- [CDC Maintaining Essential Services for Malaria in Low-Resource Countries, 2021 update](#)
- [Malaria vaccine: WHO position paper – March 2022](#)
- [Tailoring malaria interventions in the COVID-19 response, 2020 update](#)
- [WHO Malaria Vaccine Implementation Programme](#)
- [Q&A on RTS,S Malaria Vaccine](#)

Special considerations for camp-based refugee settings

- Collaborate with protection and registration staff for up-to-date population projection/planning figures (for both stable settings and in acute settings or when there is an ongoing influx of refugees) to estimate the needs.
- For countries, where frequent stock-outs of malaria test materials and treatment are experienced from the MoH supply chain, allocate resources for procurement through UNHCR medicines procurement to supplement national sources
- To promote retention and use of ITNs, address refugees' basic needs e.g., food and non-food items, through cash-based interventions, in-kind, livelihood and self-reliance support
- Where ITNs are included in blanket distribution, country public health teams are to provide guidance to ensure distribution is according to the standard, in a timely manner and accompanied by community engagement.
- Country public health teams should work with field teams and health and WASH partners on planning and implementation of ITN mass distributions, targeted distributions, and post-distribution monitoring.
- Close collaboration with WASH and settlement planners is important for IRS and other environmental control measures.
- Site selection and shelter arrangements for refugees should consider environmental factors e.g., avoid swampy areas; shelter design to allow for effective hanging of ITNs. Sleeping on beds rather than mats will contribute to an effective ITN coverage since nets are held more securely under the mats.

GUIDANCE NOTE ON MALARIA PROGRAMMES IN REFUGEE OPERATIONS 2022



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