ASIA PACIFIC LEADERS MALARIA ALLIANCE
ASIA PACIFIC MALARIA ELIMINATION NETWORK
The Partnership for Maternal, Newborn & Child Health

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Thematic brief

# VULNERABILITY TO MALARIA IN ASIA PACIFIC: BEING GENDER RESPONSIVE

Malaria is a disease of the rural poor and the vulnerable. To achieve elimination by 2030 in Asia Pacific, countries must protect those most at high risk of malaria. Pregnant women and young children for example face a higher risk because of reduced immunity yet their needs vis-à-vis malaria prevention and treatment are not being adequately met. The vulnerability to existing infectious diseases is further heightened by other health crises of global nature such as the COVID-19 pandemic and the public health consequences of climate change.

Gender-related social and cultural norms influence exposure to malaria and access to malaria prevention and treatment services. Attitudes and actions vis-à-vis seeking malaria -related services are often related to them being a "woman" or a "man". For example, women may lack information, agency, and the economic means to seek diagnosis and care for malaria. Men in Asia Pacific, by virtue of working and spending more time outdoors, may be at higher risk of exposure in certain situations. In the Greater Mekong Subregion (GMS) for example, seasonal and mobile forest workers are most exposed to malaria vectors yet have limited access to health services.

How gender-related dynamics impact access to malaria services however has been understudied in Asia Pacific. This brief provides an overview of the relationship between gender and malaria with examples from Asia Pacific. It provides policy recommendations for programs to design more gender-sensitive and gender-responsive elimination strategies.

***"Gender-responsive interventions are critical for the prevention and treatment of infectious diseases of poverty, including malaria."***

Gender and Malaria Evidence Review, Bill & Melinda Gates Foundation

# Key Messages

## Gender intersects with social, cultural, and economic factors to influence malaria exposure and access to malaria services.

**Access to information:** Inequitable access to information impacts one's ability to seek care. Women often have less information on malaria prevention and treatment because of comparatively lower literacy rates [1] [2]. In the GMS, mobile migrants, who are mostly young males, find it difficult to access information on malaria prevention and treatment in a language they are familiar with [3].

**Power dynamics:** Decision making power structures can also impact access to care. The decision to seek treatment is often in the hands of men. However, if a woman is a joint decision-maker in a household, she is more likely to seek treatment on time for herself [4]. Male patients and children are also often given preference when seeking treatment [4], although men are sometimes reported to forego seeking care due to social expectations and work responsibilities [5].

**Poverty and location:** Gender intersects with poverty and location to worsen existing health care inequalities. Women and adolescent girls from poorer households have large unmet health care needs, often because health facilities are far away, and they have limited mobility [6] [7]. High bed net price sensitivity among the poor is compounded by women's limited economic and decision-making power in the household [8].

**Outdoor work:** Workers in rubber plantations, forest workers, miners, military personnel, farmers and mobile migrant workers, who are predominantly young males, are more exposed to mosquitoes due to their outdoor work. Working in very remote areas means that they have limited access to formal health facilities and preventive programs, and tend to relocate often, which increases their risk of exposure [9]. Similarly, women are at higher risk at times because of activities that take them outside. Examples include working in agriculture, collecting water, and cooking outdoors [10].


# Evidence from Asia Pacific

## Data on gender-related vulnerabilities

The epidemiology of malaria in Asia Pacific is shifting toward adult migrant men [11], especially in the GMS. While malaria programs do collect sex and age disaggregated data, it is not routinely used to tailor malaria strategies to address gender vulnerabilities. The COVID-19 pandemic has revealed that even though the virus affects all people, the structural factors within the societies result in uneven impacts [12]. This further highlights the importance of using sex and age disaggregated data to better understand the impact of gender inequalities on malaria outcomes.

## Protecting pregnant women from malaria

Pregnant women (both adults & adolescents) are biologically at risk of malaria but are understudied in the Asia Pacific region. Existing data on malaria-related morbidity and mortality among pregnant women is not very robust [13]. Additionally, malaria treatment options during pregnancy are limited, with few antimalarial drugs proven safe and efficacious during pregnancy. Pregnant women are systematically excluded from clinical trials due to risks, complexities, and cost [14]. New evidence from the TIPTOP Project in Africa, funded by UNITAID, will inform a possible approach to community Intermittent Preventive Treatment in pregnancy (IPTp), for the dissemination of quality-assured malaria prevention for pregnant women [15]. Moreover, most pregnant women at risk of infection from Plasmodium vivax (P. vivax) malaria live in Asia Pacific [13]. The recommended radical cures for P. vivax, such as primaquine or tafenoquine, are not advisable for pregnant and lactating mothers, due to the risk of haemolytic anaemia (AHA) in foetus and infant.

## Women in malaria

Evidence suggests a clear link between gender composition of health worker and vector control teams and the acceptance of malaria interventions [8]. Involvement of women in prevention and mitigation of malaria has helped in building community awareness and compliance to malaria services [16]. In India's Odisha state, community female health volunteers (known as Accredited Social Health Activists or ASHAs), involved in malaria services, contributed to the decline in the malaria burden in the state between 2011-13 [17 18]. In Indonesia, women make up a majority (57%) of malaria cadres in high-endemic areas [16]. It is argued that gender barriers to career development lead to the underrepresentation of women scientists in malariology, which in turn impacts the research agenda [8]. Few women occupy decision-making positions in research and policy settings in health [19].

## Radical cure for children

Children under 5 are particularly at risk of malaria [20 21 16]. Recent data from the Tafenoquine Exposure Assessment in Children (TEACH) Study by GSK and MMV conducted in both Vietnam and Colombia shows positive evidence for the treatment of P. vivax malaria in children from 6 months to 15 years of age using paediatric formulations.

***"Gender-responsive strategies, including better use of sex-disaggregated data, can further improve the effectiveness of malaria efforts, promote universal health coverage and advance gender equality."***

RBM Partnership (2019)


Photo Credit: Global Fund

## Solution

***Leave No One Behind:*** **Promote an integrated approach to primary health care for all that prioritises vulnerable communities including women, pregnant women, children and men most at risk of malaria as well as other febrile illnesses.**

## Focus On

**Indonesia:** Working age males are most affected by malaria across all endemic areas. The programme distributes Long-lasting insecticidal nets (LLINs) to at-risk populations living in hard-to-reach areas, including to forest workers, without regards to the legality of their work, as well as to refugee groups. In moderate and high-endemic areas however, women are among the most at-risk groups. In response, the government is taking proactive steps to ensure that the needs of women, particularly pregnant women, are met, and that there is no gender bias in accessing care. In 2012, Indonesia became the first country in Asia to introduce malaria screening and treatment as part of antenatal care (ANC) [22]. LLINs have also been distributed to pregnant women and children through targeted campaigns in high-endemic areas and during their first ANC visits [16].

**Lao PDR:** The burden of malaria in Lao PDR is among men, mostly involved in outdoor work, particularly forest workers and migrant laborers. Lao PDR has now prioritized the understanding of mobile and migrant populations (MMPs), particularly young males in forest-related malaria work. Hence, the LLIN distribution strategy from 2016 onward puts more emphasis on mapping, tracking and distribution to MMPs in addition to continuing distribution to the resident populations in endemic areas [23].

**Nepal:** The relative burden is growing amongst adult males, especially MMPs, which includes forest goers and workers returning from India. Due to poor access to information, MMPs often lack a basic understanding of malaria transmission and prevention, and therefore rarely use Insecticide-Treated Bed Nets (ITNs) while travelling. They also tend to not seek treatment when ill or prefer informal private providers [24] [25]. The national malaria program conducts active surveillance among MMPs to ensure timely detection and case management [23]. At the community level, female health workers are trained to refer cases based on clinical symptoms and a history of travel to malaria risk areas [26].

**PNG:** In the lowland areas of PNG, both prevalence of malaria infection and incidence of morbidity are highest in young children and pregnant women. For pregnant women, IPTp is provided as part of ANC visits. However, low ANC attendance could hamper efforts for coverage [21]. The malaria program in PNG aims to raise awareness about IPTp at the community level.


## Recommendations

**Several policy gaps are common to countries in the region. A few strategies have proven effective to integrate gender considerations in malaria responses. Here are a few policy recommendations that could support a more inclusive health policy framework.**

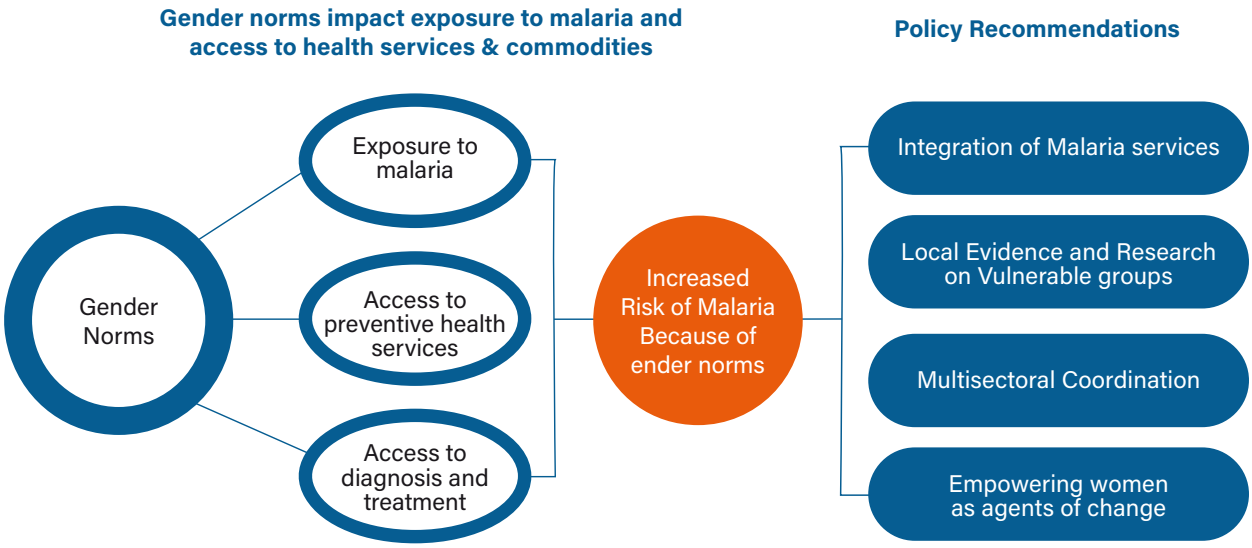

Photo Credit: Global Fund

**1. Integrate gender considerations in malaria strategies** by applying a gender lens to malaria programming and targeting services to the most vulnerable first: Integrate malaria services with Sexual, Reproductive, Maternal, New-born, Child and Adolescent Health (SRMNCAH) services to protect all women and children better. For example, ensure the distribution of LLINs, provision of IPTp, prevention and case management for children through SRMNCAH interventions. Antenatal clinics for example are an effective delivery channel for bed-nets [8].


Photo Credit: Global Fund

**2. Promote evidence gathering on exposure of vulnerable populations to malaria** and access to services and commodities. The bulk of research on the relationship between gender and malaria comes from Africa. More data is needed on gender and vulnerability

- Malaria programs should **collect, share and use sex disaggregated malaria data to better inform interventions.** Gender sensitive indicators should be incorporated within Malaria Information Systems to better understand the underlying role of gender and social norms on access to malaria services. Sex-disaggregated data must be used to design targeted interventions [27].
- Governments and donor organisation should **support research institutions in Asia Pacific** to generate local evidence on how gender intersects with social, cultural, and economic factors to shape malaria risk and access to services. Such evidence can inform more targeted malaria interventions that address the needs of the most vulnerable.
- Encourage more research on the **gender dynamics of community health worker positions** in the region, to appropriately support women in these positions.
- Promote **research on new antimalarials and commodities for vulnerable groups,** including safe and effective prophylactic medicines for pregnant women and children; and long-lasting hammock nets for forest workers.

**3. Promote a multisectoral and whole of government approach for inclusivity** by engaging the private sector and civil society in the malaria response. Solutions to tackle gender barriers for malaria testing and treatment can often be found outside the health sector. Malaria programs must work closely with non-health ministries and departments that focus on education, food and agriculture, women and child development, tribal affairs, community development, finance, planning and economic development [28] [29].

**4. Empower women to be agents of change** by creating leadership opportunities for women in the health sector and malaria research and programming. Financial incentives and safer working conditions can create a better enabling environment for female frontline workers serving communities with a high malaria burden [30].

**APLMA and APMEN have compiled a list of resources from organizations that have explored gender and vulnerability considerations in public health. Please refer to the additional materials listed below for further guidance or feel free to contact us for more information.**

# Resources

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| **TOOLS AND PLANNING RESOURCES** | **WHO and PMNCH** have developed 'A Policy Guide for Implementing Essential Interventions for Reproductive, Maternal, Newborn and Child Health (RMNCH)'. This guide presents key health-systems-related policies (including for malaria during pregnancy and infancy and childhood) and multisectoral policies that support the delivery of proven interventions to women and children. |
| | **RBM** presents a Multisectoral Framework for Malaria that promotes a coordinated multi-pronged effort, one which harnesses expertise across a range of sectors and institutions. It counts gender as a major determinant of malaria and advancing gender equality as essential to countering malaria. |
| | **RBM and the Global Fund** designed the Malaria Matchbox: an equity assessment tool guiding public health professionals in identifying and responding to risk factors and barriers to equitable access to care. |
| | **Bill and Melinda Gates Foundation** had published a 'Gender and Malaria Evidence Review' report which synthesizes the current state of research and knowledge about the ways in which gender mediates the adoption of preventive technologies and behaviours and access to treatment, as well as the potential for gender intentional and transformative approaches to research, implementation, product development, and advocacy. |
| | **UNDP** has developed a checklist for 'Integrating Gender into the Processes and Mechanisms of the Global Fund to Fight AIDS, Tuberculosis and Malaria.' |
| | **Medicines for Malaria Venture:** MMV's MiMBa strategy aims to raise the standard of care for pregnant women and their new-borns affected by malaria. |
| **RESEARCH AND EVIDENCE** | **WHO**'s Department of Gender, Women and Health (GWH) Family and Community Health (FCH): Gender, Health and Malaria |
| | **USAID and MEASURE Evaluation (UNC-Chapel Hill)** have developed 'The Importance of Gender in Malaria Data' brief that explores the importance of gender in monitoring and evaluation activities and suggests indicators to reveal and explain gender gaps in malaria outcomes. |
| | **The Global Fund** 'Malaria, Gender and Human Rights' technical brief gives practical assistance to country coordinating mechanisms (CCMs), program managers, partners, advocates and others concerned with Global Fund-supported programs in ensuring that malaria proposals and programs include measures to remove human rights and gender-related barriers to malaria prevention and treatment services. |
| | **UNDP** discussion paper on 'Gender and Malaria' makes the investment case for programming that addresses the specific vulnerabilities and needs of both males and females who are affected by or are at risk of malaria. |
| **CAPACITY BUILDING AND PEER LEARNING** | **APMEN:** A regional platform for malaria elimination in Asia Pacific. It facilitates knowledge exchange and peer-to-peer support between different partners and help address gaps in knowledge. APMEN is leveraging its Working Groups to advance discussions on gender vulnerabilities and malaria. |

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