Malaria and Mobility: Addressing malaria control and elimination in migration and human movement

Malaria is the fifth leading cause of death by communicable disease worldwide. In 2012 alone malaria caused an estimated 627,000 deaths resulting from 207 million cases. Currently 3.4 billion people, half of the world’s population, are at risk of developing malaria. Profound disparities, skill shortages, climate change, natural and man-made disasters and economic and political crisis have driven up the number of both internal and cross-border migrants. Over 1 billion people are now on the move, of which 232 million are international migrants and 740 million internal migrants. Understanding mobility patterns of migrants and addressing their specific risk factors for malaria can improve the health of migrant and host communities, and subsequently enhance their economic potential. The growing problem of resistance to artemisinin-based combination therapy (ACT) closely follows migration patterns, making migrant screening and treatment essential to effectively track the parasite and prevent new malaria outbreaks, particularly among vulnerable populations.

Migrant populations are especially vulnerable to malaria related death and illness. In all stages of migration— at origin, in transit, at destination and upon return—mobile people face marginalization and poor access to health care services, reducing the effectiveness of malaria control and prevention strategies. Malaria control strategies also often fail to account for migrant populations and their specific behaviours. Those with no history of malaria exposure have a greater chance of infection when entering areas with malaria. Migration is a social determinant of health, and the stigma, administrative and legal difficulties that migrants face often impede their willingness or ability to access health services. Factors relating to migrants’ living, working and transit conditions further increase their likelihood of contracting malaria.

Due to the complex interplay between migration and malaria, a multi-sectoral approach to malaria control and elimination is necessary. Dialogue both within and between countries to share best practices, and coordination between civil society, health, labour, immigration, social services, transportation, environment and private sectors is critical if effective, migrant-inclusive policies are to be developed.
A plan for future migrant-inclusive malaria strategies should include: internal country reviews of best practices in malaria control and elimination, ensuring high level participation in malaria programs, exploring funding opportunities from Departments of Environment, Water & Sanitation, Agriculture, Tourism and Home Affairs and others, stronger advocacy and dissemination of information regarding malaria, recognition of the intricate link between malaria and human mobility, encouragement of malaria industries to undertake domestic manufacturing to help in poverty elimination and finding new bold and innovative financing mechanisms. IOM is working with Roll Back Malaria Partnership and migrant populations in the second generation Global Malaria Action Plan (GMAP2) in 2012.

The Levels of Migrant Malaria Prevention

Determinants of malaria risk among migrants range from proximal (household and individual) to distal (social), creating a complex picture of transmission. At the household and individual level, families must make decisions on how to spend limited resources. Awareness and ability to use preventative measures may be lacking. Malaria may impact school and work attendance, reducing productivity and economic development. Migrants as a population group face increased risk for malaria and other diseases due to marginalization, due to frequent mobility (often resulting in low immunity to local strains), high-risk working, transit and living conditions, and limited access to health care. The prevalence of malaria vectors in the environment is dependent on mosquito reproduction and life cycle as well as the type of malaria-causing parasite. Mosquito reproduction and spread of malaria are increased by cramped living conditions, an abundance of surface water and hot and humid weather. There are four main types of malaria: *Plasmodium falciparum* (*P. falciparum*), *P. Vivax*, *P. ovale* and *P. malariae*. *P. falciparum* is the most deadly strain and is most common in Africa. The World Health Organization (WHO) recommends treatment for *P. falciparum* with ACT. Recently, ACT-resistant malaria has appeared in Cambodia, Myanmar, Thailand and Viet Nam as well as possible preliminary emergence in Burkina Faso. Screening and treatment of migrants is of particular importance in preventing the spread and development of new ACT-resistant strains. *P. vivax* and *P. ovale* both have dormant liver stages which can lead to recurrence and difficulty in treatment and diagnosis. *P. vivax* is dominant in Asia and Latin America, whereas *P. ovale* is found in select regions of Africa. *P. malariae* is found worldwide and can lead to chronic life-long infection.

On the societal level, economic and legal factors, as well as social stigma, can increase migrants’ susceptibility to contracting malaria. Inequitable distribution of power and resources across and within countries can cause poor housing conditions, overcrowding, malnutrition and lack of access to health care.

The Importance of the Multi-Sector Approach

“Unsustained campaigns run the risk of replacing an endemic with an epidemic situation, causing more suffering, as the collective immunity of the population will have decreased during the period prior to the interruption of the transmission. Addressing the symptoms rather than the root causes of inequities underlying malaria may thus result in both high financial and moral costs.”

—Roll Back Malaria Partnership
People on the move face difficulty in all stages of the migration process. At the place of origin, the challenging social and economic environment, along with lack of preventative options, and absent or poor pre-departure medical evaluations, can have a negative impact on health. During transit, migrants experience difficult travel conditions, lack preventative knowledge and measures, and have limited access to health care. These conditions are particularly harmful for irregular migrants and can be improved by establishing legal, regular channels for migration and strengthening cross-border collaboration. At destination, migrants may face cultural, administrative, and legal challenges, intensifying poor health outcomes. Upon returning home, returnees may continue to have limited access to early diagnosis and treatment for malaria as well as lack of education and understanding of preventative measures. In the event of political or natural disasters, the host country’s health system may be damaged or disrupted, reducing the availability of health services and treatment and negatively impacting health outcomes. The spread of malaria knows no borders. Migrants have the potential to introduce and/or acquire malaria or other communicable diseases when moving between locations and residing in host communities. This risk is heightened when there is a significant disparity in infrastructure and access to health services between neighbouring, origin or destination countries.

IOM and WHO held a joint consultation in Madrid in March 2010 highlighting the main issues to be addressed in migrant health. The outcome of the session was a four pillar approach that addresses all levels of migrant vulnerability. The consultation calls for: increased measurement and data tracking to allow for accurate reporting of malaria related health trends among migrants; advocacy for policy and legal development to remove barriers to healthcare access and reduce poverty to enhance the positive effects of migration; migrant-friendly health care, by providing, facilitating and promoting access to services; and the development of networks and multi-country partnerships to enhance and establish private and public partnerships.
References