

Urban malaria in Africa



High density population area in Accra, Ghana

“It is possible that the disaster of urban malaria can be averted if we get the right structures in place.”

Pretoria workshop participant

Malaria can no longer be considered as just a rural issue in Africa. A significant and increasing proportion of the African population lives in urban areas. There are already 40 cities in Africa with over one million inhabitants and the United Nations Environmental Programme estimates that by 2025 there will be 800 million people living in urban areas of the continent. Urban malaria prevalence rates are highly variable, even within a single city. Prevalences are highest among the poorest sections of society, since they cannot afford protection from malaria through improved housing, and are particularly vulnerable to the impact of ineffective diagnosis and treatment.

As urban centres in Africa continue to grow, the scale and impact of urban malaria is increasing. Despite this threat, control of the problem is feasible: urban malaria is uniquely amenable to prevention and control as the existing health, planning, agricultural and governance structures present opportunities for collaborative approaches that can include both the community and the substantial private sector.

The Malaria Knowledge Programme convened a multi-sectoral technical consultation on urban malaria in Pretoria, South Africa from 2 to 4 December 2004. The aim of the meeting was to identify a strategy for the assessment and control of urban malaria. This policy briefing paper reflects the discussions held during the meeting and is aimed at informing decision makers of the potential for containing and reversing the emerging problem of urban malaria.

Recommendations are presented below, followed by key findings overleaf.

Recommendations

- Urban malaria is already a problem and is likely to increase as urbanisation continues. In order to avert an increase in disease burden, concerted action needs to be taken quickly.
- There is a need to target the most vulnerable sections of society who suffer a double burden of insufficient protection from malaria transmission due to inadequate housing and living conditions, and limited financial resources. These factors restrict their access to appropriate preventive and curative services.
- Inter-sectoral interventions are the key to successful urban malaria control and must include close collaboration between water, agricultural, urban planning, commercial, health and community players.
- Existing health and governance structures in urban environments need to invest in programmes to manage urban malaria effectively using established methods and tools for mosquito control and malaria prevention, diagnosis and treatment.
- Since most fevers in urban areas are not due to malaria, presumptive diagnosis and treatment of fevers as ‘malaria’ will result in greater wastage of resources, ill health and loss of life. The need for accurate diagnosis is made more urgent by the fact that combination therapies for malaria are expensive.

Key findings

There are several features that distinguish urban and rural malaria. Urban malaria occurs in a diverse and rapidly changing environment with high levels of human migration, high-density populations and expanding urban agricultural areas. Malaria transmission intensities in urban areas are different to those of peri-urban or rural areas.

In urban areas, risk factors that may be different to those in rural areas lead to different disease burdens. In areas with sedentary populations and lower levels of malaria transmission, all age groups, rather than just young children and pregnant women, may be at risk of severe malaria. Accurate assessment of malaria transmission rates across towns and cities is needed to facilitate targeted prevention and control. This will reduce ill health and save lives, preserve and build conditions for economic growth and avoid unnecessary diversion of resources away from rural areas.

Opportunities for responding

There are important omissions in our knowledge of malaria in the urban context. The following areas were identified as priorities at the Pretoria meeting:

- **A cost-benefit analysis of diagnosis and drug delivery in urban settings is required:** There must be consistent and effective use of diagnostic tools and health systems to assess the proportion of fevers that are attributable to malaria infection. The potential cost savings of a shift from treating all fevers with anti-malarial drugs to treatment following confirmed diagnosis need to be clarified.
- **A cost-benefit analysis of larviciding (attacking mosquito larvae), source reduction (reducing breeding sites) and environmental management for control of mosquito breeding in urban settings is required:** Government, public-private partnerships and community-based responses to control of mosquito breeding are critical, yet unexplored in terms of the financial costs involved for urban communities, donors and government bodies.
- **Appropriate, practical and cost-effective monitoring tools for the urban context must be evaluated or developed:** As recognition of urban malaria is a relatively new phenomenon, the identification and promotion of effective ways to monitor and evaluate any progress made to combat the disease are vital. There is a need to measure levels of transmission and to determine malaria infection risk factors, in order to understand how the most vulnerable people can protect themselves and seek effective treatment in urban contexts.
- **The unique nature of social structures and their effect on disease burden and strategies for control remain unknown:** In urban settings, the dynamics of social relationships are relatively unexplored. The nature of social networks involving individuals, families and communities is likely to influence the success of prevention and treatment strategies.

This paper represents the consensus of participants in a cross-disciplinary conference on Urban Malaria in Africa, held at Pretoria, South Africa, December 2-4, 2004. Sectors represented at the conference were water, agriculture, eco-health systems, epidemiology, entomology, community health, NGOs and social sciences. The Malaria Knowledge Programme's key partners in the conference were the System-wide Initiative on Malaria and Agriculture (SIMA), the International Water Management Institute (IWMI), the Environmental Health Project (EHP, USAID) and the International Development Research Centre (IDRC).

A full report on the meeting will be available shortly and may be viewed and downloaded at www.liv.ac.uk/lstm/majorprogs/malaria/outputs.htm and www.iwmi.cgiar.org/sima/index.asp

“Inter-sectoral interventions are absolutely vital to tackling urban malaria.”
Pretoria workshop participant

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